Creative Revolution:

Bergson's Social Thought

by

Michael Vaughan

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Table of Contents

Declaration of Inclusion of Published Work

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Note:

"Responses to Evolution" was a co-authored piece with Keith Ansell Pearson and Paul-Antoine Miquel. The passages incorporated here are entirely my own work.

This thesis has not been submitted for a degree at another university.

List of Abbreviations

In the text and endnotes, references to published works are generally made by author's name and date of publication (full details can be found in the bibliography). Works by Bergson have been identified by the following abbreviations:

Works by Bergson

CE	Creative Evolution
CM	The Creative Mind
DS	Duration and Simultaneity
IM	Introduction to Metaphysics
L	Laughter
M	Mélanges
ME	Mind Energy
MM	Matter and Memory
O	Oeuvres
TFW	Time and Free Will
TSMR	The Two Sources of Morality and Religion

Abstract

I have three main aims in writing this thesis on the social thought of Henri Bergson: to establish what society is in his view, to work out the implications of this for individuality, and to demonstrate the contemporary value of his philosophy as a whole, thus construed. It will be the task of the first two chapters to establish that society is a biological and cultural reality for Bergson. This will involve the demonstration that Bergson's understanding of living systems can be applied to groups as well as to single organisms, and that while the biological evolution of society underlies both individual actions and cultural evolution they nevertheless remain irreducible to it. In chapter three, I will consider the implications of his account of society for our understanding of the individual. These implications will be quite serious, as Bergson attributes an irreducible agency to society that immediately demands a re-assessment of the agency of the individual in terms of a participation in wider natural and cultural processes, and specifically a re-assessment of the central Bergsonian notion of individual freedom in the context of this natural and cultural evolution. In the conclusion, I will make a case that the value of Bergson's philosophy today is that it can help us to move beyond the mechanistic paradigm that has dominated western thought since the scientific revolution by providing a powerful image of our relation to each other and to nature that is based on participation rather than control.

In addition, there are two themes running through the thesis. One concerns Bergson's critique of dogmatism both in philosophy and in the sciences, and his insistence that new ways of thinking be developed in response to new experience that cannot be integrated into existing interpretive models. In order to remain true to the spirit of his thought it has in many places been necessary to re-think his conclusions in relation to a new scientific context, rather than merely repeat what he says. The other concerns Bergson's strong commitment to the role that philosophy can play in overcoming the natural tendency to control our environment, a tendency that he saw gaining a dangerous hold over the human spirit in the age of industrial capitalism. The essence of philosophy in this context is revealed to be a shift in attitude from control to participation.

Introduction – Bergson's Social Thought

Society arrives late in Bergson's work, only receiving his full attention in his last book *The Two Sources of Morality and Religion* (1932), but when it does arrive it takes on enormous significance, demanding a re-assessment of a number of key issues concerning life, consciousness and freedom that he had developed in his previous work. The defining characteristic of Bergson's social thought is his commitment to the *reality* of society, which above all means the *efficacy* of society. In Bergson's dynamic world-view, if society *is* something that is because it *does* something. This equation of reality with activity is at the heart of Bergson's philosophy. It is the basis of his commitment to considering all problems in terms of *time* rather than the geometrical *space* that had characterised western thought – including social thought – since the scientific revolution. For Bergson, thinking in terms of time reveals the creation, elaboration and indetermination at the heart of reality. It places him much closer to contemporary post-mechanistic sciences (quantum and complexity theory in particular) and it underlies his development of *intuition* as a method that can grasp the unity and mobility of things that the *intellect* effaces (for Bergson, the intellect is the practical tendency of consciousness to apprehend reality as a collection of discrete entities we can act upon, and as such it implies the abstract space that geometry brings to perfection). However, while his application of this method to the study of life and consciousness are well documented, its application to the study of society remains obscure. It is my intention here to clarify it, and to draw out its implications for understanding the nature of individuality and freedom in Bergson's philosophy.

When Bergson approached social questions he had already demonstrated that consciousness – or more specifically *volition* – cannot be reduced to an interaction of atomistic mental states, and that life – or more specifically *evolution* – cannot be reduced to an interaction of atomistic physico-chemical elements. In both cases it is not to some transcendent force that he appeals, but simply to a mode of activity that is immanent in *the whole* – the whole mind, the whole organism, or the whole of life's evolution – and the same is true of his social thought: his commitment to the reality and irreducible efficacy of society

involves no transcendent force, no 'essence' of society over and above individuality (Bergson calls this immanent whole a 'continuous multiplicity'). What Bergson reveals is that the dynamics of social organisation cannot be reduced to the actions of its individual members – society is not a 'set' in the mathematical sense, or 'discrete multiplicity' as Bergson calls it – and this in turn necessitates a corresponding re-evaluation of those individuals themselves, especially with regard to their agency.

One of the major innovations of *The Two Sources of Morality and Religion* is to ask; if society itself is *active*, how are we to understand individual actions in relation to it? Bergson examines this irreducibility of society to its component individuals in both a natural and a cultural context, demonstrating that certain biological facts such as evolutionary convergence, symbiotic relations and instinctive behaviour, and certain social facts such as moral obligation, religious belief and laughter, are inexplicable without reference to society as a real level of biological organisation (and in the latter cases to an additional level of cultural organisation based in, but not determined by, natural organisation). In regards to both natural and cultural organisation, we are appealing to something that is 'invisible' as far as the intellect is concerned, but that is nevertheless necessary to make sense of the concrete facts, or individuals, that the intellect singles out for its exclusive attention. Indeed, for a purely intellectual approach society has only been conceptualised in two basic ways: either it is an ineffective and abstract unity between the individuals who make it up (in which case it is merely nominal; that is to say, it 'is' and 'does' nothing), or, if we wish to attribute a reality or even causality to society itself, we have a problematic and even transcendent 'essence', 'structure' or historical 'law' on our hands. To intuition however, society appears as a concrete unity – heterogeneous, continuous and qualitative – that is immanent within the individuals that it articulates, and not a transcendent or abstract idea. This is why Bergson's account of society has an explanatory value that his work on individuality alone could not have achieved: it explains why many of the things individuals do and think (particularly in the context of morality and religion) make no sense at all if referred to individuals alone, or to society as a transcendent reality. It is the presence of society *in* the individual – that is to say, the action of society *through* the individual – that accounts for religious faith and

moral obligation for Bergson (and as we will see, it accounts, in the end, for consciousness itself).

Hence, when I say Bergson's social thought necessitates a re-assessment of individuality, I mean this in the strongest sense. It is not some property or attribute of 'the agent' or 'individual' that must change; it is the substance – we could go so far as to say the very *existence* – of the individual as a discrete entity that Bergson revises. Indeed, in his 1930 essay "The Stating of Problems" Bergson explicitly claims that the moral and social sciences lie even closer to metaphysics than biology does (CM 79; O 1320), and how Bergson has been celebrated as a philosopher of life! Bergson uses the term 'metaphysics' to describe the discipline that grasps things holistically in their unity and mobility, that is to say in their creative evolution, or most generally *in time* (and he differentiates it from 'science' as the discipline that grasps specific predictable and repeatable phenomena: the intuition of the duration of our consciousness that Bergson described in his first work *Time and Free Will* (1889) is exemplary of this metaphysical knowledge). Yet if Bergson believes society lies even closer to the duration of consciousness than life does, this must mean that society is *more spiritual*, or to put it another way *less material*, than life is; and indeed, for Bergson society is, in the end, located *within* consciousness, (or to put it more precisely *across* or *throughout* consciousnes*ses* – this is Bergson's concept of 'virtual instinct'). Indeed, the relation between the two, society and individual, is intrinsic to consciousness itself. This is nowhere more evident than in *The Two Sources of Morality and Religion* when Bergson subsumes the abstract opposition between society and individuality under a more fundamental opposition between 'the open' and 'the closed' as the two extreme dynamics or 'tendencies' that the intrinsic relation *between* society and the individual can take (Bergson's concepts of 'the open society' and 'the closed society' are relatively well-known; less well-known is the fact that they are meaningless if taken apart from their counterparts 'the open soul' and 'the closed soul').

The closed indicates the tendency of individuals and society to condition each other in approximation to an ideal static unity; the open indicates a participation of the individual in the social evolution that is productive of state-forms in the first place (it is this that Bergson recommends, and which I am here calling 'creative revolution'). With this new set of 'principles' comes a new

methodology. Since there is nothing individual, no thought or act, that is not also social, *all* knowledge and action is to be referred first to the relation between society and individuality – a relation that Bergson has re-located *within* each 'individual' – in order to get the measure of what precisely is acting. It is then to be further related to the tendency – towards a mutual conditioning or a co-evolution – that the thought or act indicates in order to discern whether it contributes to an opening or closing of the evolutionary potential of both society and the individual. In this way we discover the direction or 'whence and whither' of an act, as Bergson often says. On this view, social change or 'revolution' would neither be reducible to an impersonal historical process (as in Comte or the later Marx for example) nor to the realisation of an ideal conceived beforehand (as in the 'civil society' introduced in the modern period or the 'democracy' of today). Different state forms, and the status of individuals within them, are external views or 'snapshots' of an ongoing creative *co*-evolution of society *and* individuality.

With Bergson, then, we find ourselves very far from an abstract (yet extremely prevalent) concept of society as a set of extrinsic relations between individual agents, and of social change as a passage from state to state (whether conceived mechanistically or teleologically). In fact, this abstract conception of society as a 'discrete multiplicity' (perfected, as we will see in section two, by the modern philosophers and perpetuated, as we will see in the conclusion, by liberal democracy) is, for Bergson, nothing more than the continuation, in theory, of the closed tendency alone to its logical conclusion (although, as we will see in our conclusion, when such theories are continued into practice they perpetuate the closed tendency itself as a social reality).

We also find ourselves at some distance from current mainstream assessments of Bergson's philosophy. What the study of Bergson's social thought reveals above all is that *consciousness cannot be given over entirely to the individual*, yet an emphasis on the purity and internality of the duration of consciousness – and the abstract conception of freedom as *creativity* that follows from it – has dominated assessments of Bergson's work ever since it was foregrounded by Gilles Deleuze in his influential *Bergsonism* (1966). By foregrounding his social thought, I am taking Bergson's philosophy in a very different direction – one that replaces individuals in the social and natural

evolution that is their true context. If society is a concrete unity between individuals, then it is a source of both *obligation* (we cannot opt out of a real unity that acts through – or as I will say *articulates without determining* – us) and *aspiration* (our action is not limited to what the individual can do since we can act through – or as I will say *participate in the evolution of* – this larger social 'body'). It is only by paying close attention to this context that we can bring precision to our understanding (and performing) of the creative action that Bergson constantly reminds us we are capable of, and avoid reducing it to a kind of individualism and even egoism, a reactionary impulse of the 'closed soul' against what it perceives as an objective order or 'closed society'. By giving up something of its reactionary individualism, and finding its place among what Bergson calls the 'articulations of the real', creative action can gain in precision what it loses in caprice and open out into a participation in the evolution of society and nature. We could go so far as to say that this participation is the vocation, the *responsibility* even, of what we might call the 'holistic' individual – an individual who is *individual, social and ecological* (Bergson himself goes even further, characterising this participation as *love* and describing it as the 'destiny' of the human). In this way, and on the basis of his rigorous biological understanding of the intrinsic relation between nature, society and individuality, Bergson is able to raise the questions of individual freedom, social unity and political action to a whole new level (and in a contemporary context I will raise the questions of natural unity and ecological action along with them). As we will see in our third chapter, a holistic understanding of individuality and the notion of freedom as *participation* that goes with it are both more precise and of greater contemporary relevance than the abstract, reactionary notion of individual freedom as *creativity* that had characterised Bergson's early work and continues to characterise much 'Bergsonism'.

Indeed, by focussing on his social thought we can see just how far Bergson had developed by the end of his career, from the contemplation of individual freedom to a more active – we may even say *activist* – philosophy that recommends in the strongest terms a participation in the evolution of society and nature (even criticising philosophy itself for remaining merely theoretical, or even worse for inadvertently contributing, through an excess of intellectualism, to the closed tendency). It is in this sense that we finally understand the

emphasis Bergson always placed on individual *effort* as an effort of the individual in a direction *contrary* to individual*ism*. Thus, the central question of this thesis – *what is society in Bergson's philosophy* – and the revision of individual agency that it leads to, is no merely theoretical matter. Bergson's philosophy reminds us that we are not bound to follow the direction of nature (which for him leads inevitably to war between, and hierarchy within, societies along with a controlling or exploitative attitude towards nature) and co-determine each other in a closed society. In his later work he describes the attitude we must take (which, going beyond his core terminology and drawing instead on contemporary biology, I am calling 'participation') in order to go beyond the natural and cultural conditions that are given us at birth, and participate in the creation of ourselves and our world *sympathetically* – that is, in such a way that all individuals can participate in the common evolution that includes and articulates them, rather than inhibiting that evolution and each other. As we will see, there is a principle of non-exclusion at work in Bergson's social thought that must, by its own logic, be extended to all life (in this respect he is very close to the contemporary 'earth democracy' movement, and to 'social' and 'green' anarchism, in displaying a remarkable awareness, for his time, of the *inseparability* of our responsibilities towards society and nature).

Seen from this perspective, all Bergson's work reads like a protest against quietism in philosophy. Philosophy is not and cannot be above the 'merely empirical' questions that affect our daily lives – questions of ethics, politics, health, education, and today particularly the environment. Nor can philosophy be a merely academic practice. When Bergson places Christian mysticism at the centre of his analysis of political action in *The Two Sources of Morality and Religion* what he emphasises above all is its commitment to the continuation of contemplation into action, and he is critical of philosophy for only going half-way when it remains theoretical. As I will demonstrate in the conclusion, a philosophy such as Bergson's must be practiced in order to be understood, not merely considered in the abstract. Contemplation, reason, logic, and debate are merely useful – they are tools of the adaptation *intellect* – and as such they are not adequate to the task of articulating, with sufficient seriousness, the fact of the open future or our responsibility to participate in it.

The Development of Bergson's Social Thought

It was not until his final work, *The Two Sources of Morality and Religion*, that Bergson turned his attention to the nature and functions of human society. Yet there are earlier occasions on which he engaged with the nature of society and its relation to the individual. He had spoken briefly of a 'social self' as opposed to a 'deep self' in his first book *Time and Free Will* and at greater length about social insects in *Creative Evolution* (1907), distinguishing their instinct from human intelligence. He had also attributed an essentially social function to comedy in his popular work *Laughter* (1900) in a way that foreshadowed his later treatment of morality. We can learn a lot about Bergson's social thought from these early works, especially from *Creative Evolution*, on which he depends quite heavily in *The Two Sources of Morality and Religion*, but it is only in the latter work that he treats social questions in their own right, placing them at the centre of his analysis, and developing concepts specific to an understanding of human society.

For this reason it would be counter-productive to give a chronological exposition of Bergson's social thought – the reader would not know the full significance of what was being said until the very end. On the other hand, the importance of *The Two Sources of Morality and Religion* for his social thought does not make it preferable to read Bergson 'backwards' as F.C.T. Moore has suggested, for the full sense of how society can work in the way that it does at the cultural level explored in *The Two Sourcesof Morality and Religion* depends to a large extent on what Bergson has said about how society works at the natural level (and therefore about how biology works in general) in *Creative Evolution*.[1] The clearest way to present Bergson's social thought is to proceed logically, rather than chronologically, and this is the order the chapters of the thesis will take, looking first at the biological evolution of society and then at the cultural evolution of society, before considering the place and role of the individual in this dual social process. However, as Bergson's understanding of society developed and deepened throughout his career, it will be useful at this point to provide a brief chronological survey focussing on three key engagements with the nature and functions of society: first in *Time and Free Will*, second in *Creative Evolution*, and third in *The Two Sources of Morality and Religion*.

Since a complete list of all the occasions on which Bergson mentioned society will no doubt be of use (and it is significant to note that the word does not even appear in the index of *Oeuvres*) this will be provided in the endnotes.

Time and Free Will: Bergson's Early Social Thought

There are a number of valuable comments on society in *Time and Free Will*, most of which fall within the final section of chapter two "The Two Aspects of The Self" (TFW 129-139; O 85-92); he refers back to this section once more in chapter three (TFW 167; O 110-1) and twice in the conclusion (TFW 231 & 236; O 151 & 154).[2] There are two respects in which this text is of value for an understanding of Bergson's social thought.

– The first concerns the problematic status of society in this early work. Bergson's primary concern in *Time and Free Will* is not with society but with individual consciousness and freedom, and in this context society is presented in a negative light, as one of the reasons people remain 'out of touch' with the inner duration which is the source of their potential freedom. Society falls squarely on the side of space, and the reality and efficacy of society therefore depends upon that of space. However, in *Time and Free Will* Bergson often speaks as if space is a mere representation of real duration, and if this is the case the social or 'surface self' is incapable of effecting any real inhibition upon it – a problem indeed for the reality and efficacy of society that I want to emphasise as a key feature of Bergson's social thought. When I come to consider this text in detail in chapter three, I will highlight that there is a real activity of society even in this early text, although a merely negative one: it inhibits the freedom of the individual by contributing to the externalisation of conscious states from each other – and from the duration of the 'deep self' in which they interpenetrate – in an impersonal and therefore publicly communicable form.

– The second does not concern Bergson's own thinking about society at this period of his work, but rather provides us with a resource for understanding his mature social thought in *The Two Sources of Morality and Religion*. I refer to the two multiplicities that he uses with reference to individual consciousness alone in this text, but which may, as I suggested above, prove useful for

considering the relation of the open and closed society in *The Two Sources of Morality and Religion*. I will consider the way in which these two multiplicities may be applied to society, and what this new application reveals about their original application to consciousness, in chapter three.

By contrast, Bergson only uses the word "society" twice in the whole of *Matter and Memory*, in the section "Description of the Method" at the start of chapter four (see MM 239 & 242; O 319 & 322). These comments merely reproduce the same view of society that is found in *Time and Free Will*: that it is in preparation for, and in response to, the demands of society that consciousness divides the external world and itself into discrete facts. Ironically, these two comments occur at the beginning of the chapter in which Bergson will greatly mitigate the difficulties that arose from the dualism of *Time and Free Will*, and therefore mitigate also the stark contrast between individual and social experience.[3]

Creative Evolution: Bergson's Transitional Social Thought

The major engagement with society in *Creative Evolution* takes place in chapter two "The Divergent Directions of the Evolution of Life: Torpor, Intelligence, Instinct", predominantly in the sections "Intelligence and Instinct" (CE 88-98; O 611-23) and "The Nature of Instinct" (CE 107-13; O 635-44), although the first mention of society in the chapter is actually in the first section "Divergent Tendencies" (CE 64-6; O 578-81).[4] Bergson's engagement with society in *Creative Evolution* is focused on insect rather than human society, and it is subsumed under his account of instinct, as the mode of consciousness of social insects. While this constitutes a far deeper engagement with society than that of *Time and Free Will* insofar as Bergson recognises it as a real level of biological organisation, he does not yet engage with it as an important aspect of human evolution. Nevertheless, this text is essential – we may even say foundational – to an understanding of his social thought in three respects.

– First, the refusal to reduce life to an aggregate of material parts leaves room for a real efficacy of society that is not reducible to the action of individuals. The general account of life as a 'logic of organisation' that Bergson

develops is not tied to the solids the intellect focuses on, and can therefore operate just as well at a social as at an individual level.

– Second, it follows from this that society and individuality are two real levels of biological organisation, despite the very different extension throughout matter they present to our 'logic of solids' (and we may note that even for mechanistic thinkers it is an inescapable fact that society is the operative level in polymorphous insect species as far as natural selection is concerned). However, in tracing the evolution of consciousness Bergson describes the *dissociation* of instinct from the intelligence of humans. This means that in *Creative Evolution* individuality and society develop along two different evolutionary lines, and humans are still characterised by individuality. Importantly, the model of dissociation means that both instinct and intellect – or society and individuality – are characteristics emphasised by, and not exclusive properties of, insects and humans. This will provide an important basis for the account Bergson develops in *The Two Sources of Morality and Religion* of the 'closed society' as the persistence and influence of a real social organisation just like that of the ants along the human line of evolution.

– The third point to make about *Creative Evolution* is with reference to a more ambiguous use of the word society in chapter one. In the section on "Individuality and Age" (CE 10-15; O 507-13), Bergson claims that a tree, regarded in its potentiality (to become many trees through budding) rather than in its actuality (as a single tree), is a society rather than an individual (CE 11; O 508). This comment, although brief, demonstrates the ubiquity of a 'social function' of unity (real, not abstract unity) among diversity throughout the natural world, in a way that foreshadows the real unity of the 'open society' at a cultural level that Bergson will develop in *The Two Sources of Morality and Religion*. I will consider these three points in detail in chapter one.[5]

The Two Sources of Morality and Religion: Bergson's Mature Social Thought

In *The Two Sources of Morality and Religion* the study of society takes centre stage, and the engagement with society runs throughout the book. With this in mind I will somewhat artificially, but for the sake of usefulness, single out

certain passages that particularly foreground the key issues of Bergson's social thought.

– First, regarding the reality and efficacy of society: in chapter one, "Moral Obligation", Bergson describes the social organisation that underlies moral obligation in a number of sections from the first on "Social Order and Natural Order" through to the section on "The Closed Society" (TSMR 1-23; O 980-93); and in chapter two on "Static Religion" he describes the way in which it underlies religious belief in the sections from "Social Significance of Myth Making" through to the one on "Assurance Against the Unforseeable" (TSMR 96-117; O 1074-94). In chapter four on "Mechanics and Mysticism" Bergson describes the persistence and defining characteristics of the real social organisation of human beings in the sections from "Persistence of the Natural" through to that on "War and the Indiustrial Age" (TSMR 234-252; O 1206-25).

– Second, the inadequacy of an intellectual analysis of society is highlighted in chapter one in two consecutive sections that describe how the sources of "Pressure and Aspiration" are deeper than the consciousness of the individual that suffers them, the central mistake of "Intellectualism" being that it attributes agency to individuals alone (TSMR 65-77; O 1043-55); in chapter two Bergson describes the impossibility of accounting for religious belief with sole reference to rational individual agents in a number of sections from the first on "Absurdity in the Reasoning Being" through to the one on "The Myth-Making Function" (TSMR 83-91; O 1061-6).

– Third, a number of issues relating to the direction and future of humanity emerge in *The Two Sources of Morality and Religion* in a way that immediately involves the creative individual in the natural and cultural evolution of society; at the centre of this is the question of a movement from the closed to the open society, which Bergson describes mid-way through chapter one in the sections on "The Liberation of the Soul" and the movement "From the Closed to the Open" (TSMR 39-53; O 1019-30), and in the final sections of chapter four from the one on the "Evolution of Tendencies" through to the one on "Joy" (TSMR 252-275; O 1225-50). Additionally, a useful summary of the place of "Closed Society and Open Society" in relation to the evolution of life can be found at the start of chapter four (TSMR 229-234; O 1201-6).

– Finally, an important and recurrent theme of *The Two Sources of*

Morality and Religion is Bergson's commitment to the irreducibility of cultural to natural evolution. His major theoretical engagement with this centres on his rejection of the heredity of acquired characteristics at a biological level, and it allows him to state that civilised man is not superior to primitive man, he is merely born in a superior context: see the sections at the start of chapter two, as noted above (TSMR 83-91; O 1061-6) and the two consecutive sections later in the same chapter: "On Chance" and "Persistence of the Primitive Mind" (TSMR 117-137; O 1096-113).[6]

Let us draw this chronology to a conclusion by summarising the key features of Bergson's social thought as presented complete in *The Two Sources of Morality and Religion*.

– First, there is a real social organisation of humans themselves, conceived as the persistence of a 'virtual' version of the instinct by which he characterised social insects in *Creative Evolution*. This real social activity carries two further features: first, it demands a reassessment of individual agency, which can no longer be considered the sole origin of our moral or religious activities, perhaps of any of our activities; second, it places the study of society under the remit of metaphysics rather than science. Society is unusual in this respect, in that even in its closed function it is not reducible to a 'logic of solids'.

– Second, Bergson's introduction of the concept of 'the open society' makes of human society a positive and creative process in its own right, and not the mere negation of individual creativity that it was in *Time and Free Will* or the closed form of organisation that it was in *Creative Evolution*: on the one hand it becomes a real multiplicity and not just a collection of discrete individuals; on the other hand, it becomes a real creative activity and not a mere inhibition of creative individuals.

– Third, there is a detailed treatment of a range of cultural forms and their relation to the general biological functions that underlie them. Bergson expresses this relation as 'variations on a theme' – nature sets the necessary theme, simply that we must live in society, and the development of it is left to a contingent cultural evolution. This model is invaluable for avoiding the two extreme positions – biological reductionism and cultural relativism – that continue to

dominate (and polarise) debates surrounding sociobiology. It also forms the basis of Bergson's important rejection of the distinction between the primitive and the civilised at a natural level: it allows him to insist that in 'civilisation' it is only the cultural context that has evolved and not the mentality of the individual.

– Fourth, Bergson's social thought opens the way for him to think through the history, direction, future and significance of humanity with reference to a concrete situation and not a merely creative capacity. The fact that an individual by definition – that is to say, by Bergson's dynamic definition – participates in a social process means that she is both conditioned by, and creates the conditions of, cultural evolution. Throughout the thesis I will be pushing for an appreciation of Bergson as a far more historically engaged thinker than is usually recognised.

– Finally, in terms of Bergson's method, society falls well within the province of metaphysics, being 'invisible' to the intellect and irreducible to its material parts. Additionally, Bergson's strategy of using dualisms that reflect two ideal limits – static and dynamic – allows him to subsume the relation between the social and the individual under the more fundamental relation between what he calls the closed and the open. This means that rather than being in simple opposition, the individual and society are either complicit in closing themselves in a static arrangement, or push each other forward in a creative aspiration.

Responses to Bergson's Social Thought

Unfortunately, the story of this development of Bergson's social thought has not been substantially continued beyond his own work. There are isolated texts on the subject but they are infrequently cited and there has been no sustained study of Bergson as a social thinker (and I am concerned here with texts that would engage directly with the questions of what society is and does, and how this reflects back on individuality – I am not thinking of texts that merely deal with what may be construed as 'social questions' such as morality and religion, without the key question of society itself necessarily arising). The only book length studies I am aware of are Guy Lafrance's *La philosophie sociale de*

Bergson (1974) and Matteo Fabris' *La filosofia sociale di Henri Bergson* (1966), and a further two in which the focus is more on politics: Phillipe Soulez' *Bergson politique* (1989) and Ellen Kennedy's *Freedom and the Open Society: Henri Bergson's Contribution to Political Philosophy* (1987). There are also very few articles dealing directly with Bergson's social thought. A generous list would only include a handful of texts: see Georges Gurvitch's "La philosophie sociale de Bergson" (1949) and the chapter "Bergson's Sociological Theory" in his *La vocation actuelle de la sociologie* (1950), Pierre Burgelin's "Le sociale et la nature chez Bergson" (1959), Ellis Sandoz' "Myth and Society in the Philosophy of Bergson" (1963), Norman Kemp Smith's "Bergson's Manner of Approach to Moral and Social Questions" (1948) and Antoine Hatzenberger's "Open Society and Bolos: A Utopian Reading of Bergson's 'Final Remarks'" (2003).

Bergson regularly crops up in the literature on Georges Sorel's anarcho-syndicalism, for which he was a major resource (see Sorel 1961, Curtis 1959 and Horowitz 1961). The very same qualities of Bergson's thought that led Sorel to adopt him within his own very dubious project (appealing to Bergson's *élan vital* to justify a violent revolution – nothing could be further from the spirit of Bergson's philosophy) led others to dismiss him as a vague, emotive and ultimately dangerous thinker (and it would require a specific historical study to estimate the degree to which the mockery Sorel made of Bergson's philosophy reflected back on Bergson himself and thus contributed to criticisms such as Althusser's or Politzer's).

To see Bergson represented in this way is saddening. His social thought has the potential to make incisive contributions in many areas of social and political theory, and why his thought has not been consistently developed in this direction is a mystery. When a philosopher who, all told, wrote comparatively little, saw fit to devote a whole book – and his final book at that – to social questions we would clearly expect this to be reflected in assessments of his thought. I can only suppose that the publication of *The Two Sources of Morality and Religion* in 1932 was simply too late to redress the erroneous perceptions of him as a spiritualist and a vitalist that consolidated his descent into obscurity, and that his concept of the open society was either ignored, or taken as another objectionable form of essentialism. I will take care to distinguish Bergson from any such position in the next section.

In the end, to ask why Bergson's social thought was overlooked would tell us more about the preoccupations of the intellectual culture that overlooked it than it would about Bergson himself. More instructive would be to ask what it was in Bergson's philosophy that seemed important to those who did write about him. In general, the engagements with his work by other major philosophers have focussed on his account of individual experience, or have developed this aspect of his work into a more general metaphysics. For example, Bachelard engaged with Bergson on the nature of inner experience and whether intuition did reveal duration or something more instantaneous (see Bachelard 1992); Sartre engaged with him over the nature and relation of ideas (see Sartre 1962) and Merleau-Ponty engaged with him on the question of the relation between the mind and the body (see Merleau-Ponty 2001). Add to this the fact that Deleuze, whose work on Bergson is almost solely responsible for his rehabilitation as a valid philosophical resource in the English speaking world, focused on the purity of duration, described the method of intuition as one which does away with space (and therefore does away with society too), raised memory to the status of an ontology (a word, incidentally, that does not appear in a single one of Bergson's published works) and treats "The Virtual" as an unconditioned source of absolute freedom… what hope did Bergson's social thought have?

In the rash of recent work about Bergson, the vast majority of which accepts the remit for what is important in Bergson's philosophy from Deleuze's very unbalanced presentation, we find the following themes to be the most common ones (and I note here certain damaging implications of these themes for Bergson's social thought):

- first, a critque of habit, coupled with an indiscriminate celebration of creativity and what is often called 'the radically new' – this results in a tendency to gloss over the difference between totally contingent determinations and what Bergson calls the 'articulations of the real' which are where much of his social thought is located

- second, this creativity is often identified as the 'ethical' component of Bergson's thought, in which case his 'ethics' remains as vague as the

'radically new' itself – this leads to a very individualist, almost capitalist, conception of freedom, very far from the notion of participation in community and nature that is foregrounded by his social thought (let us not forget that Bergson himself said that the philosopher who sees creativity everywhere is for that very reason the one who *cannot* recommend it)

- third, there is an emphasis on ontology (The Virtual) that comes dangerously close to the metaphysics Bergson criticises for thinking it has explained reality by giving it a name – this (like the emphasis on 'pure' duration) effaces the difference between the levels, individual, social and natural, at which we can participate in creative evolution, and thus obscures the real conditions of both political and ecological action, again reducing ethics to 'creativity' (whatever that is)

Additionally, contemporary Bergsonism implies an absence of responsibility for the creative effort we do make: contrary to the Deleuzian (and ultimately, Kantian) emphasis on *conditions of creation*, I want to show that Bergson's social thought foregrounds *the creation of conditions*. Did he not, in his very last pages, attempt to emphasise that humanity's future depends on our current behaviour? I will return to the question of what kinds of creative practice Bergson's social thought calls forth, and what form a sympathetic participation in society and nature may take, in the conclusion. Let us turn now to Bergson's place in the history of social thought, in order to compliment this text-based survey of what Bergson says with a context-based assessment of what is distinctive, even important, *about* what he says.

Bergson's Place in the History of Social Thought

In order to discern what is innovative from what is conventional in Bergson's social thought it is essential to locate his work in its historical context. In this section I will look at what characterises ancient and modern conceptions of society before locating Bergson's social thought in its more immediate context –

the emergence of sociology in the work of certain key post-Hegelian thinkers, in particular Marx, Spencer, Comte, Durkheim, and Weber – in order to see what distinguishes him among them. In doing this I will attempt as much as possible to consider how Bergson would have situated himself in relation to the history of social philosophy. This section is, then, a sketch of the critical engagement with social theory that we could say is 'missing' from *The Two Sources of Morality and Religion*.[7] In the account of ancient and modern social thought I took Bergson's own assessment of ancient and modern thought in general, as he presented it at length in the fourth chapter of *Creative Evolution*, as a guide. For the account of his relation to sociology I took as a model the way Bergson situates himself within the field of contemporary evolution theories in the first chapter of *Creative Evolution*. There, Bergson is keen to demonstrate the affiliation of his thought with that of Darwin, de Vries, Eimer, Cope, Dreisch and the rest up to the point where they depart from experience and become (to different degrees and in different ways) dogmatic. Likewise, I will emphasise Bergson's concordance with, and departure from, each of the social thinkers I compare him to.[8]

For Bergson, ancient and modern philosophy are both developments of the natural tendency of thought towards practical activity, and his analysis of them reveals how all sorts of problems result when this faculty of action is applied in the field of pure speculation. This critique of the intellect runs through all Bergson's work, and in *Creative Evolution* he draws an analogy between the model of reality it leads to and the projection of a movie camera: both mechanisms reconstruct movement and change out of a series of moments or states that are in themselves immobile and unchanging. The question of where the intellect gets these immobile elements from I will examine in chapter one when we look at its evolution. For now, it is sufficient to note that the intellect is not concerned with the real nature of activity but only with the results of our own activity, and that it focusses on those aspects of reality on which our action can get a hold: "if matter appeared to us as a perpetual flowing, we should assign no termination to any of our actions [...]; in order for our activity to leap from an act to an act, it is necessary that matter should pass from a state to a state" (CE 191-2). Bergson sees the history of philosophy as the development of the metaphysics to which this practical function naturally leads, one in which reality

is atomistic and static, and movement is at best derivative and at worst merely apparent: “metaphysics dates from the day when Zeno of Elea pointed out the inherent contradictions of movement and change, as our intellect represents them” (CM 17; O 1259, see also CM 141; O 1376). For Bergson, the common characteristic of ancient and modern thought – scientific or metaphysical – is their adherence to “the general condition of the sign, which is to denote a fixed aspect of the reality under an arrested form” (CE 210; O 773). Let us look at the difference between the signs used in the two eras.

The signs by which the ancients described reality were linguistic, and as such retain a qualitative aspect, along with all the value and human significance that comes with it. The ειδος of Plato, the τελος of Aristotle, “correspond to privileged or salient moments in the history of things – those, in general, that have been fixed by language” (CE 211; O 774). Plato and Aristotle may have intended them to express the essence of a thing, may even have thought they did so, but for Bergson they merely hypostatise those salient moments of the qualitative milieu of experience that are of particular practical or social relevance. The signs that modern science uses, on the other hand, are mathematical rather than linguistic, and through them thought arrives at a purely quantitative or objective understanding of reality as lacking any inherent value or significance. Where the ancients preserved significance by attaching change to certain salient moments, the moderns abolished it, along with all qualities, by reducing any process to a purely quantitative or numerical series, within which no moment has any distinguishing relevance for us. This reflects the “essential object of science”, which Bergson describes as “to enlarge our influence over things” rather than understand them, regardless of how “speculative in its form” and “disinterested in its immediate ends” it appears or considers itself to be (CE 210; O 773). For Bergson, then, the essence of ancient thought was the reduction of laws to genera, that of the moderns the reduction of genera to laws; both nevertheless reducing movement to a passage from state to state. Insofar as both are symbolic and external modes of knowledge Bergson points out that there is only a difference of degree between them – “[mathematical] signs differ from those of language by their greater precision and their higher efficacy” (CE 210; O 773) – but this should not lead us to overlook it, as this difference of degree leads to different kinds of social theory in the two eras.

Ancient Social Thought

As Bergson points out, when the Greeks "put immutable Ideas at the base of the moving reality a whole physics, a whole cosmology, a whole theology, follows necessarily" (CE 201; O 761). Our concern here is what *sociology* follows necessarily, or to put it another way, what image of society is expressed by the cinematographical mechanism of thought in the context of the Greek philosophy of Ideas. Bergson distinguishes three conventional understandings of the ειδος of Plato and Aristotle: (1) a quality, (2) a form or essence, and (3) an end or design, but he is not satisfied with any of them, and by relating this theoretical concept back to the practical function of the intellect that created it, he suggests a very different definition:

> We might, and perhaps ought to, translate ειδος by 'view' or rather by 'moment', for ειδος is the stable view taken of the instability of things [...], the intention or mental design which presides over the action being accomplished. (CE 201; O 761)

For Bergson, then, ancient social thought will be revealing of its origins in the purely practical language and ideas that serve as the Ideals with reference to which the whole social process was to be understood. Taking some of the key elements that are common to both Bergson's social thought and that of the ancients, I will note the different significance they take on in the context of the ancient philosophy of Ideas and Bergson's philosophy of change.

– First, both Plato and Aristotle consider society to be a *reality* independent of, and irreducible to, individuality. Where they differ from Bergson is in considering the actual form of society (and individuality) to be given in advance of its historical development. For Plato, the form of society is given in an Idea, the knowledge of which tells individuals (or at least some individuals) how they should organise themselves (or each other); for Aristotle, the form of society is given as an end that acts as an 'attractive' cause on individuals (*Politics* 1252b30-1253a1). For both thinkers, therefore, individuals may be historically prior to society, but society is naturally – or even

ontologically – prior to individuals. This allows both Plato and Aristotle to provide an associationist account of the origins of societies that in no way renders society itself contingent upon or reducible to individuality – its formation was their very purpose all along: "man is by nature a political animal; it is his nature to live in a state" (*Politics* 1253a1-18) and he cannot realise his potential as a 'political animal' outside the state (*Politics* 1253a18-29).[9] For Bergson, as we will see, society itself may be a reality and even a necessity, but the form it takes remains entirely contingent upon the historical series of individual creative contributions.

– Second, Plato and Aristotle both consider society to be a *heterogeneous multiplicity*. However, whereas social heterogeneity for Bergson meant there was real continuity and qualitative difference between individuals, for Plato and Aristotle it simply meant a diversity of individual abilities, roles or specialisms: "no two of us are born exactly alike, we have different aptitudes which fit us for different jobs" (*Republic* 370a-b), and thus "society originates because the individual is not self-sufficient, but has many needs that he cannot supply himself" (*Republic* 369a-b). For Aristotle, the heterogeneous individual citizens are the "material" out of which the city-state is fashioned (*Politics* VII.4.1325b38-41, see also II.1 and III.1). Thus, while the heterogeneity of individuals was a positive attribute of society for Bergson, standing as a major element in his view of its reality and evolution, it led Plato and Aristotle to value the social good (which is unity) above the diversity of individual goods: "is there anything worse for a state than to be split and disunited, or anything better than cohesion and unity" (*Republic* 462a-b); "even if the end of the community coincides with that of the individual, it is clearly a greater and more perfect thing to achieve and secure that of a community, for while it is desirable to secure it for the sake of an individual, it is nobler and more divine to do so for for the sake of the community" (*Nichomachean Ethics* I.2, 1094b7-10).

– Third, Plato and Aristotle both hold that social unity is constantly under threat from individuality, and consequently some artificial way of maintaining unity is necessary. Indeed, for Plato the Ideal unity that is the greatest Good of society even justifies the 'noble lie' that is passed on by the guardian class to encourage each individual to accept their place in the heirarchy. It is in the context of this threat that they both attach great importance to the constitution

(πολιτεια) of the city-state, and we can note that both Plato and Aristotle hold the constitution to embody the real form of society despite the fact that it is literally artificial or man-made. Aristotle defines the constitution as "a certain ordering of the inhabitants of the city-state" (*Politics* III.1.1274b32-41) and "the form of the compound" which provides the material (the heterogeneous individuals) with the social unity and identity over time that brings them closer to their end, and therefore to ευδαιμονια (*Politics* III.3.1276b1-11). The constitution is thus much more than a written document; it is an immanent organizing principle or "way of life" of the citizens, analogous to the soul of an organism (*Politics* IV.11.1295a40-b1 & VII.8.1328b1-2). The way Plato and Aristotle subsume the creation of the constitution under its given form reduces the individual threat to social unity to another case of mere 'imperfection' whereas in Bergson it is a real product of evolution, which he understands by drawing a distinction between a natural function of society that indiviuals cannot escape, and the artificial forms of society which they participate in creating. Of course, in Plato and Aristotle's account society is not 'created' at all but *crafted* in the image of the Ideal or end by the lawgiver (νομοθετής) – it is a rational and skilled process without analogy to art or creativity.

– This brings us to our final point: both Plato and Aristotle place great importance on, and to some extent emulate – the figure of the lawgiver. Despite what in Aristotle is a seemingly immanent principle of order, there must be an efficient cause to explain why a city-state acquires its constitution in the first place. This is the νομοθετής – the one who establishes and maintains the πολιτεια of the city-state. He is "the cause of very great benefits" (*Politics* I.2.1253a30-1), for he is the efficient cause that brings the citizens closer to their 'proper place' in society. Indeed, when Plato describes the action of the demiurge in political terms in the *Timaeus*, as "compressing by force the reluctant and unsociable natures" of the Ideas into their current form (*Timaeus* 34c-36d) he could be seen as constructing an analogy between the ontological work of this great craftsman, the Δημιουργός, and his own project in the *Republic* of constructing society in the likeness of the Ideal. Aristotle too compares the lawgiver to a δημιουργός who fashions the raw material (the heterogeneous individuals) into a finished product, the social unity (*Politics* II.12.1273b32-3 & VII.4.1325b40-1365a5). For Bergson, however, this analogy would be deeply

problematic. As we will see in the conclusion, an intellectual approach to social organisation effaces the dynamics of the real evolution of society, and can only result in a change from one state form to another. The point for Bergson, with society as with change in general, is to re-contextualise all states in the evolution of which they are merely snapshots. (When considering Bergson's social thought it is important to remember that while his critique of the representation of change as a series of states remains a merely epistemological or methodological point with reference to physics, it takes on a much more serious practical meaning in the context of political action, suggesting the possibility of a creative revolution or participation in the open society, rather than a mere change of form of the closed society.)

Before considering modern social thought, let us note that this attachment to the Idea did not grip the sophists so tightly as it did Plato and Aristotle, and we can see in their work an acceptance that experience remains irreducible to the 'salient moments' that the intellect singles out and rarfies. Their view was that customs and laws (νομοι) run counter to nature (φυσις), and that it was nature rather than law that should guide our conduct, a position that Plato caricatured in his *Gorgias*, when he presented Callicles' 'natural' morality as an insatiable and unreflecting appetite (Plato, *Gorgias* 505a). In fact, the sophists' discussions of the tension between νομος and φυσις were an examination of morality in a critical and positive spirit. Protagoras, for example, seems very close to Bergson's own account of the closed society when he emphasises justice as a reality of human nature, a condition of survival in a cultural milieu much as claws, armour or speed are conditions of survival for animals in a natural milieu. He also emphasises the different systems of justice that are found in different cities, and reconciles his natural realism and cultural relativism by claiming that all humans necessarily have a system of justice but that the actual form of that system may vary (Plato, *Protagoras* 320c-322d). Of course, such contingency is intolerable to Plato, who in the *Theatetus* presents Protagoras' acceptance of the contingency of cultural forms as complete relativism, regardless of the natural necessity that underlies it: "whatever each city judges to be just and fine, these things in fact are just and fine for it, so long as it holds these *opinions*" (*Theatetus* 167c, my italics).[10] It is perhaps closer to Aristole, for whom the same form could be immanent within different material incarnations.

Modern Social Thought

We have seen certain 'salient moments' around which ancient social thought was organised: society is real (albeit as ideal or end), it is materially heterogeneous since it is made up of individuals, yet at the same time its unity is threatened by and valued above those individuals, and it thus requires a constitution to give it form and an efficient lawgiver to impose it. These are all qualitative concepts, and the theory of the ancients was literally meaningful – full of human significance – which is not surprising if it was, as Bergson claims, organised around those moments of experience that had the greatest practical significance for social life. These moments nevertheless have very different implications in the context of ancient thought, and of Bergson's: it is the difference between the approximation to a given ideal and the participation in a creative evolution. We will see, in turning to modern social thought, that although in one sense it is the same intellectual representation of society in static terms brought to a higher precision, the difference in degree between the more and less precise amounts in fact to a difference in kind. Modern social theory, modelled on the mathematical ideal of the new science of Galileo, involves the complete abolition of qualities, significance or privileged moments (not to mention teleological explanations) from the corpus of acceptable methods and principles. Let us see how the qualitative language of the Good, Ideal or Proper nature of society is replaced by the abstract mathematical language of equality, rights and universal law. I will again note some general characteristics of this period, although this time they are not ones that Bergson shares; in fact they are in most cases antithetical to his view, as universal law is antithetical to duration and creative evolution.

– First, the social thought of the moderns differs from that of the ancients and from Bergson's at the most fundamental level: *for the moderns, society was artificial*. It was an artificial or contractual agreement that individuals enter into. This fundamental difference means that we can treat the moderns more quickly, and in a more straightforwardly critical manner, than we did the ancients. In this respect they are dealing with – and indeed introducing the notion of – *civil society*; that is to say *voluntary* relationships, organizations and institutions that

will form the basis of a functioning society (as opposed to the obligatory institutions of a state or the commercial institutions of an economy). Hobbes' 'leviathan' for example, his key image or metaphor for society, is a single artificial humanoid composed of individual men (a discrete multiplicity, we may say, or abstract unity), and constructed by them under the pressure of the need to 'escape' from the state of nature. Society has a contractual origin: it is a construction (and as we will see, it is constructed according to a mathematical ideal).

– This leads to the second point: the moderns hold that this voluntary association necessarily arises in response to the difficulties individuals face in a pre-social 'state of nature'. Thus, in part their account of society results from a pessimistic view of human nature, in which individuals are both aggressive towards, and fearful of, each other. Society – in the form of government and law – first and foremost protects individuals from each other's absolute freedom to do as they please outside it. *Leviathan* (1651) is essentially an argument for government based on the belief that the state of nature is a 'war of all against all' due to the human tendency to satisfy desires. Individuals draw up a social contract that guarantees equal rights of all men out of fear of each other rather than as a response to actual violence (in this respect Hobbes is similar to Bergson, who defines war as a readiness to fight, more of a disposition than an event – yet in Bergson this is only one side of our nature, and the weaker side at that). Locke and Rousseau had a slightly less pessimistic view of human nature, which only becomes aggressive and fearful when it is complicated by the development of technology, property and currency. This is also a view that Bergson to some degree shares, yet Bergson's thought is far from pessimistic, focussing on the potential humans have to overcome their natural and social conditions by creatively participating in the evolution of nature and society. Pessimism, for him, is a result of the intellectual view of things as discrete entities obeying impersonal laws, which ends with an alienation of the subject in an objective world of no inherent significance, and worse, an atomistic world in which there is no such thing as society, leaving individuals free to impinge on each others' freedom.

– Third, the moderns understand society in terms of universal or natural rights (sometimes called inalienable rights) which are held to be self-evident and

universal, as opposed to legal or statutory rights which are relative to the specific interests (religious, cultural, geographical) of specific societies. We can see here the analogy with Galilean science, which was a major influence on Hobbes and Locke in particular. The equation of natural and moral law – see, for example, Hobbes' early text *The Elements of Law, Natural and Politic* (c1640) – is one that Bergson is critical of since it distorts the nature of each: the natural law takes from morality an inappropriate *imperative* connotation, and the moral law takes on from the natural an inappropriate *universal* connotation (TSMR 3-4; O 983-4). While the scientism of the time provides the template for a political disourse framed in terms of universal laws and inalienable rights, we should note that Locke has a more specifically moral argument for government based in his Christianity: the notion of equality before God acknowledges a prior existence of natural rights. Rousseau's general will, which is identical with the rule of law, also serves to distance law from a purely scientific understanding, being an act of the whole population rather than an abstract order held above them (although the notion of general will is far too complex to go into in any depth here). Here, for Bergson, we have a kind of false optimism that also follows from the intellectual attitude to the world. In lieu of intrinsic significance and a real social articulation of individuals (which would mitigate the war of all against all that the moderns feared) the intellect posits an ideal of order, an artificial version of the real unity it has effaced. In this respect, the contractualism of the moderns (and the liberal democracy of our own time) would amount to an exercise in damage limitation: guaranteeing the values and security that the intellect represents as lacking in a pre-social state of nature.

– Finally, and moving away from the account of society and towards methodological or epistemological issues, a consequence of understanding the laws of society as analogous to the laws of nature is that the objectivity that characterised Galilean natural philosophy is held up as an ideal for political philosophy. Indeed, Locke went even further, and in his *Essay concerning Human Understanding* (1690) raised the possibility of a political *science* (and not even the Galilean mechanics was considered a science in the seventeenth century)! This epistemological optimism – unusual in the philosopher who did not trust that either our simple ideas of qualities or our complex ideas of natural kinds provide us with reliable information about the reality that causes them –

comes down to the empirical conception of knowledge he was working with, and the distinction between the natural and the artificial that guided its application. Taking the term in the strict scholastic sense, what Locke meant by *scientia* was not the 'objective knowledge' of Galileo but more specifically the process of *deducing accidental qualities of objects from essential properties that are known with certainty* (which strictly speaking meant only mathematics and geometry were sciences). For Locke, we could never achieve this in the study of nature, because even if we break down the complex ideas we have of a tiger or tree and thus bring our knowledge back to its origins in experience as a cluster of simple ideas of sensation, there is no way we can discern, among all the qualities the tiger has, which are properties essential to the species or 'natural kind' and which are not. Hence the study of nature, although it may progress, would always remain 'philosophy' rather than science because the set of properties that constitute its essence can never be finally fixed, nor can its qualities ever be deduced with certainty. The situation is different with artificial objects such as a clock or chair, which have their origins in the ideas of reflection according to which they are designed as well as the natural materials of which they are made, although the fact that knowledge of the materials is still based in ideas of sensation constitutes enough of a problem to prevent Locke believing that knowledge of artificial objects could ever be properly scientific either. In a similar way, the situation is also different with political ideas. Although complex, a political or moral entity such as 'justice' or 'murder' is constructed *entirely* by us. Empirically, we can trace our knowledge of such entities back through our own thought to simple ideas of reflection alone, avoiding the problems that arise from tracing our knowledge back to simple ideas of sensation, and in this sense a political science would be possible. Locke's political science would be, in short, the ideal of the closed society as a static order entirely accessible to rational analysis.

In summary, both the ancients and the moderns adopted an intellectual attitude to the world that distorted the real nature of society. In the qualitative thought of the ancients society was held up as an ideal, and individuals would aspire to create themselves in the image of it. Hence, the aspiration that is so important to

Bergson – as a source of going beyond what is possible in given natural and social conditions by participating creatively in the evolution of those conditions themselves – is mis-represented as, *and more importantly limited to*, the realisation of a specific form given in advance. In the quantitative thought of the moderns on the other hand, society was created as an artificial unity to guarantee the value and safety of individuals that the mathematical precision of their world view had represented as lacking. Here, law is universal and morality is only obligation; aspiration has no place in the system (Hume is a notable exception). Rather than misrepresenting or inhibiting aspiration, the moderns abolished it completely, representing the whole of society and morality by analogy with the universality of mathematical 'laws of nature'. However, and somewhat ironically, by abolishing real social unity and moral aspiration completely from their world view, the moderns potentially inhibited its development far less than the ancients had by incorporating it. Bergson often points out that it is when one tendency is developed to its limit that the opposite tendency will spring forward, and in relation to the universal mechanism and determinism of modern science, he identifies a missed opportunity for philosophy to develop a metaphysics like his own by developing the precise study of the real continuity, unity and creativity that science ignored: "mechanism would then have become a *method* and not a *doctrine*" (CE 221; O 788). He regrets the fact that from Descartes to Kant philosophers chose instead to underwrite the hypothesis of universal mechanism, whether by providing an epistemology that described experience as essentially and originally spatial (as in the empiricists' account of how knowledge is constructed from discrete ideas or impressions) or by providing a metaphysics that describes reality as ultimately static (as in the rationalists' account, influenced by the ancients, of how we only have a confused experience of a reality conceived in terms of monism, eternity or perfection). It would not be within philosophy, but within sociology and biology that the idea of evolution would develop.

The Early Sociologists

Let us turn our attention to the development of sociology, and to establishing

Bergson's place among the various positions philosophers took up within this new field. We said that we will take Bergson's critical examination of evolution theories in the first chapter of *Creative Evolution* as a model, but there are major differences between biology and sociology that we must bear in mind. For one thing, it was simply not possible to treat social facts in a scientific manner. Psychologists study the brain, biologists study the body… what material is left for the sociologist to study? As we will see, it was necessary for sociology to establish itself on very different grounds, closer to philosophy than science in many respects, and in the intentions of some of its originators at least, it aimed at being a kind of meta-discourse much closer to a traditional view of philosophy (think of Aristotle's 'mother of sciences' or Spencer's 'synthetic discourse'). We can nevertheless ascertain roughly how Bergson would have situated himself in relation to the field if we bear in mind that in all his studies he rejects the assumptions, hypotheses and generalisations that theorists make on the basis of certain 'facts', opting instead to reintegrate those facts – which are snapshots taken by the intellect of a fundamentally indivisible reality – in the evolutionary processes which are their true context. This is not to efface the reality or efficacy of specific processes; it is to understand them holistically rather than fragmenting reality and then attempting to recompose it with the fragments thus achieved. Let us see how the early sociologists represented social change, for this was their preoccupation, before looking at what society *is* for contemporary sociology.

In *Creative Evolution* Bergson describes how evolution forced itself on biology, turning it into a science of change (transformism) rather than of types (anatomy). We could say that *revolution* forced itself on sociology in much the same way, and we can see, in the accounts of social change provided by Hegel, Comte, Marx and the rest, many of the same difficulties in grasping the real nature of 'change' that Bergson identified in the early evolutionists – mechanism is present in the form of historicism (Comte, late Marx), finalism in the form of the rational design or destiny of society (Hegel, Comte again, early Marx) and dualism (vitalism) in the form of essentialism (Durkheim, Simmel). The issues here, then, are not so much the nature and attributes of society as an ordering of individuals, as it was for the ancients and moderns, but the role of individuals, history and reason in the evolution of society.

First, society is essentially historical for the sociologists; they were

unanimous in agreeing that what they studied was a *process*. The question, then, is how they understood this process. Second, this dynamic view of society led to the common problem of the role of the individual, history and reason in this social process. The key question here was whether social evolution was determined according to some kind of laws or whether it was contingent upon human action. Finally, the sociologists were presented with a choice – and this is perhaps what is most revealing about their *attitude* – as to whether to attach a positive or a negative value to change itself, given its acceptance as a fact. Of course, we have seen how the ancients and moderns describe the historical development of society, but this development was very strictly separated from their understanding of what society *is*. With sociology, for the first time, society *is* its evolution, and it is through concepts of fundamental change or development that society itself was to be interpreted.

Although not classed as a sociologist, Hegel was the first to provide a significant philosophical account of society in terms of its development in the wake of the French Revolution of 1789 (figures like Burke and Paine did not, on the whole, address fundamental questions of what we might call 'social ontology'). It is easy to see how Hegel differs from Bergson despite the many similarities between them. Both utilised traditional oppositions – mind and nature, subject and object – in order to reconcile them or move beyond dualism; both valued real freedom not just in itself but also for its wider implications, and both had a basically evolutionary view of reality. However, in the context of Hegel's rational and systematic approach to philosophy, oppositions were reconciled dialectically, with each being a kind of transcendence of the other, while in the context of Bergson's intuitive and holistic approach any rational manifestation of change indicates an inhibition of real creative change. This dialectical model was reproduced by Marx in the context of his materialist conception of history – it is not formal relations between ideas but economic relations between individuals that are the 'motor' of social change – yet in Marx's case it entails a further consequence that serves to distance his social thought from Bergson's as much as Hegel's idealism does: from Bergson's perspective we could say that society is reducible to a set of relations between individuals, and is therefore by definition artificial (for Marx it is merely the case that capitalistic relations are 'unnatural'). We should note, however, that it is not

as a consequence inefficacious, since the set of relations takes on properties that are not reducible to individuality for Marx, primarily the 'false consciousness' of the proletariat that arises due to an individual's place within the economic structure (the way they are objectified as wage labourers, and alienated from their own activity, under industrial capitalism). We will see in the conclusion that there is something very like Marx's 'ideology' at work in Bergson's account of the closed society in terms of a 'dimorphism' between those who lead and those who obey. However, Bergson's emphasis is on an overall 'false consciousness' on both sides in falling into the structures of the closed society in the first place, and not a 'false consciousness' of one class that serves the interests of the other (or at least this is less significant for Bergson than the overall tendency towards a set of static relations – his emphasis is on the importance of creation rather than emancipation).

To return to Hegel, freedom and reality as he conceives them would, in Bergson's terms, tend to limit each other to the ready-made terms and concepts that the intellect takes up from everyday life, and which limit, rather than realise, the potential of thought in general. In terms of his social thought, we could say that for Bergson, Hegel's rationalism is oriented towards an ideal given in advance, and that society cannot, for him, creatively evolve. What is more, by holding that the individual can *rationally know* how society is developing and thereby participate in it, Hegel would, in Bergson's terms, be inhibiting the *essential creativity* of social evolution itself. Hence, evolution has a very different value for the two thinkers: for one it realises an ideal, for the other it is an unforeseeable and perpetual creation. For Marx, freedom lies in the emancipation of the worker from the 'false consciousness' that leads him to accept capitalism as 'natural' and would be realised in the transition to a more natural society (although we can note that Marx's attitude towards individual agency changes after 1848 to a more historicist and epochal account of revolution). Marx differs from Bergson not through an absence of creativity in this 'natural' existence but by the opposite, by an absence of social determinations (economic relations). Marx thinks that the hierarchical relations that characterise capitalist society can be left behind – indeed, in his terms they can since they are (historically) contingent and *extrinsic* relations between individuals – whereas for Bergson, the relation between those who command and

those who obey is based in an *intrinsic* dimorphism of society itself as a heterogeneous reality (we will look at the specific dynamics of this dimorphism in times of revolution in the conclusion).

Comte's positivist approach to history involved a complete rejection of the kind of idealist metaphysics within which Hegel interpreted it, although he shares an epochal view of history with both Hegel and Marx, based in the mentalities he saw prevailing in different epochs – theological, metaphysical and scientific or positivistic – and in this respect he was as much an idealist as Hegel himself. Indeed, he is further from Marx's thought if anything, completely ignoring the social conditions underlying the mentalities (assuming they have any purchase even as generalisations) by which he characterised society itself. There is nothing in Comte of the co-evolution of individual and society that we find in Bergson, and that allows Bergson to account for history without rendering it either historically determined or contingent upon individual actions. Indeed, any kind of complexity would have been invisible to Comte, given that his positivistic approach was characterised by an imitation of the scientific method of the seventeenth century. This led Comte into the difficulty of identifying social facts on the one hand, while refusing to admit the existence of any entity called 'society' to which they could be related on the other. It also led him to follow the tendency of the quantitative or fact-based method to its technological conclusion: his task was not to understand but to *craft* society. For Comte, society is to be *directed* by scientific knowledge and practice, but given his essentially mechanistic understanding of science this meant that for the thinker who characterised society by the two principles, 'static' and 'dynamic' (or 'order' and 'progress'), even before Bergson did, it was the dynamic tendency that presented a problem, with the job of his social engineering being to keep it in check; it was order that provided the dominant value. Nothing could be further from Bergson's emphasis on the importance of participating in social evolution, and in his terms, Comte's social theory and practice would at best remain limited, given its intellectualism, to the manipulation of details within an existing social set-up; at worst, it would inhibit a real social evolution that goes beyond what is already known (or knowable) in the positivist sense.

Durkheim's work was in a sense a continuation of Comte's application of the scientific method to social research. His method involved the inference of

general laws from observable facts, but unlike Comte he was a realist as far as society itself was concerned; problematically so for Bergson, who objected to what he saw as the 'rarefaction of society' that was involved in Durkheim's essentialism. For Bergson, this essentialism rendered the relation between society and individuality deeply problematic, much as the rarefaction of life by vitalism or of consciousness by spiritualism rendered their relation to matter problematic. For Durkheim, society primarily meant structure, or more concretely institutions, and the aim of sociology was to study the 'social facts' in which these 'functional structures' or 'society' was evident. In his realism, then, Durkheim remains close to Bergson, for both attributed the source of 'social facts' to society itself rather than to the specific actions of individuals. However, for Bergson it was always the action of society – as a real level of biological organisation – acting *through* the individual that explained phenomena (such as morality and religion) that were completely inexplicable with reference to individuals alone. The 'facts' for Bergson, then, were to be related to a complex co-evolution of society and individuality, and not to an abstract 'structural' essence of society that is independent of individual action. It is his method, so different to Bergson's, rather than his essentialism, that Durkheim has in common with contemporary sociology (if we think, for example, of the primacy that debates around 'structure versus agency' have in contemporary sociology we see a reproduction of the problematic dualism Bergson objected to, in much the same way that it is reproduced in the simplistic 'nature versus nurture' debates that characterise much sociobiology).

Like Durkheim, Herbert Spencer (whose philosophy Bergson had wholly accepted as a student) developed Comte's application of the scientific method to the study of society, dropping the idealistic aspects of Comte's positivism, and attempting to synthesise the new social science with evolutionary biology. A generalised notion of evolution – which he characterised as a progression from simple, undifferentiated homogeneity to complex, differentiated heterogeneity – provided the framework for Spencer's whole philosophy, yet it was not natural but social evolution that exemplified this process for him. Like Comte, he had an epochal understanding of evolution, describing two types of society, the militant (structured around relationships of hierarchy and obedience) and the industrial (based on voluntary, contractually assumed social obligations). For Spencer, the

two epochs signified an evolutionary progression of the 'social organism' from the simple and undifferentiated to the complex and differentiated. However, it is clear that both of these would be forms of the closed society for Bergson, the militant closer to the natural dimorphism of 'closed souls' that result in internal heirarchies, the industrial closer to the intellectual ideal of liberal democracy that we saw the moderns develop in the image of the same Galilean method that Spencer later inherited (the latter is the least objectionable form of the closed tendency for Bergson, and therefore 'progressive' as long as its imposing of *abstract equality* on individuals does not inhibit the other, open tendency, which is based in the dynamic between what are really *qualitatively different* individuals).

We find a curious mixture of mechanism and finalism in Spencer's evolutionism. First, he perpetuated the seventeenth century ideal of a universal natural law that would apply to society, consciousness and morality as well as nature, and his 'synthetic philosophy' attempted to bring these realms together in a single story of the evolutionary progress of humanity towards 'perfection'. From Bergson's perspective, nothing is more objectionable than the claim that there are no exceptions to the scientific explanation of phenomena according to universal laws; Spencer's 'radical mechanism' is the antithesis of Bergson's approach, which recognises the necessity of developing a new 'method' for each new realm of facts (and I have already noted, in relation to Deleuze's very abstract interpretation of Bergson, that to equate life, consciousness and society – even in terms of pure duration, let alone fixed mechanical laws – is to render completely opaque the way these three levels are articulated through each other). However, mixed in with Spencer's mechanism, and just as objectionable to Bergson, is a Lamarckian finalism, applied first in his work on sociology and later on biology. The end point of evolution, then, would for Spencer be a 'perfect man' who is 'perfectly adapted' to the 'perfect society' – a state which he characterises in terms of the first law of thermodynamics, that of the conservation of energy. This is completely unacceptable in the terms of Bergson's philosophy, which emphasises the continuation of evolution into a fundamentally open future (evolution travels in its various directions without any end in view), and characterises this movement as an exponential expenditure of energy, in explicit contradiction to the second law of thermodynamics (I will

examine thermodynamics in detail in chapter one).

Closer to Bergson's thought was the anti-positivistic school of German sociology. Weber argued that sociology should concern itself with social *actions* rather than social *facts*, through interpretive rather than quantitative methods. The interpretation of action would be guided by an understanding of the significance that individuals attach to their own actions. Without, to my knowledge, going as far as Bergson's claim that society itself acts through individuals, Weber nevertheless takes its existence much more seriously than the positivists, as did Simmel, who famously posed the essentialist question *what is society* (although this in the end led him further from Bergson's thought in the direction of a Durkheimian emphasis on analysing social action within a symbolic and structuralist framework).

In conclusion, and to return to Comte, I want to take note of a somewhat peculiar occurrence in this period, yet one that also has certain parallels with Bergson's own project: Comte's development of what he called a 'religion of humanity'. This could be seen as a more qualitative version of the civil society of the modern philosophers, an attempt to replace the social unity that Comte thought was lost along with traditional worship. However, despite drawing resources from religion and recommending we 'live for others' it is far from Bergson's open society; first because it emulates what Bergson identified as a 'static' or 'natural' religion that serves to preserve society against the threat of dissolution that individuality poses (whether by selfishness or weakness), rather than the 'dynamic' religion or mysticism which Bergson takes as a model for creative participation in social evolution; and second because the very notion of 'living for others' or 'altruism' has no sense in a context where individuality is held to be indistinct in the first place (the 'open society' that Bergson sees embodied in the mystic's 'love for all humanity' is a continuous multiplicity in which the atomistic view of individuality no longer holds good). Rather, Bergson speaks of a social self (and I will extend this to an ecological self) in which all individuals participate. As we will see in the conclusion, love for all humanity has nothing to do with the 'other' in Bergson's open society, it has to do with an expanded conception of the self.

Contemporary Sociology

From the perspective of Bergson's social thought, contemporary sociology presents a rather bleak landscape. Perhaps because the current climate demands that essentialism is to be avoided at all costs, there is no real concept of society to be found, and the 'science of society' appears to concern itself instead with what properly speaking are *individual* actions and beliefs performed in a social context. Approaches that recognised a reality of society, however, have tended to efface any connection between individual action and social action, no doubt because there was no concept of society acting *through* individuals in a way that articulates without determining them (we will see in chapter two that sociobiology as a discipline has the same blind-spot). Instead, there is an extrinsic relation between society and individuality that can only be resolved on one side or the other (the 'structure versus agency' debate). Functionalism, for example, prioritised the whole social structure over its various parts through a biological analogy drawn from Spencer: institutions are 'organs' that function in the interests of the whole social body. As a discipline, sociology's preoccupations are largely methodological, and its methodology is predominantly quantitative. We know how Bergson criticised biology and psychology for making exactly this mistake, and society cannot be adequately represented as a discrete multiplicity any more than life or consciousness can. Among the methods employed, however, there are some that come remarkably close to Bergson's social thought, in particular those surrounding 'participant research' and 'social cognition'.

Overall, it is quantitative research that is valued within sociology, although this reflects the interests of society itself as much as the discipline that studies it (in a similar way, genetics is valued within biology for its practical applicability, as we will see in the conclusion). Statistical analysis is the best way of making reliable general claims and predictions; other quantitative research methods such as content analysis, surveys, and longitudinal studies are also useful in this respect. The overall goal is that of applying such knowledge in the realm of social planning (in a clear echo of Comte's positivism and its practical end in social engineering). However, it is in certain areas of qualitative research, as we might expect, that we find sociology draw closest to Bergson's

social thought. Here we find an emphasis on observation, interviews and a valuing of contextual and subjective accuracy over generalisations. While interviews and observations provide a more qualitative account of social action (and this approach in sociology predominantly draws on phenomenology for its theoretical components), by far the most impressive method from a Bergsonian perspective is that of 'participant observation', where the researcher actually goes into the field (such as a community project or an institution), and participates in the activities she is studying, often over a prolonged period of time, in order to acquire a deep understanding of it. This method is controversial for obvious reasons – the researcher is constantly affecting the subject of their research – but this is only problematic if the seventeenth century ideal of objectivity is adhered to. For Bergson, who, in his final work, considered philosophy to be incomplete if it is not continued into practice, this participatory sociology is perhaps the most promising direction in which the discipline could go, valuing positive action over positivistic knowledge.

Also very promising is the recent emergence of the field of 'social cognition' (within sociology, as distinct from the very different and very poor work done under the same name within philosophy), which overcomes many of the theoretical difficulties attached to considering society as a discrete multiplicity. A central question of this field is *to what extent* is an action socially and individually determined. This may not sound like much, but it overcomes the deadlock of the structure versus agency debate (and we will see in chapter two that it is exactly the question Bergson's 'sociobiology' posed in 1932, and which could potentially overcome the nature versus nurture debate that still dominates evolutionary psychology today). Within this field, there are questions relating to 'embodied cognition' and the 'extended mind' that are challenging an atomistic conception of the individual in much the same way that I will claim Bergson's social thought does in chapter three. This area of sociology does not assume that mind should metaphysically or methodologically be assumed to reside within the individual brain: a major question is not *what* but *where* is the mind, and this is worked out through the investigation of various hypotheses; for example, are emotions social pains in the way we can say aches are physical pains. It involves, in short, an ongoing and innovative revision of the boundary between society and individuality that I think Bergson would have been very

enthusiastic about. That society is a discrete multiplicity, and the individual an atomistic entity, is, after all, one of the most unshifting assumptions of western philosophy. Bergson is one of the few philosophers who has contributed to the development of an alternative model.

What is distinctive, then, about what Bergson has to offer to social thought? A provisional summary at this point may include:

- A concept of society as an effective reality, but not an essentialist one that rarefies it and renders its relation to individuality problematic.
- A concept of social change that avoids completely reducing it to historical laws (whether ideal or material) or rendering it completely relative to individual actions.
- A concept of 'indistinct' individuality that leaves room for real and not just abstract social unity, and following from this:
- The discovery that real individual freedom is not in fact individualistic, but rather a sympathetic participation in social evolution.
- A critique of the pessimism that arises in the face of either social determinism or the absence of any concept of real or natural society.
- A critique of the false optimism with which the intellect reacts to this absence by constructing an artificial social unity (since its spatial representation has effaced real unity).
- A different kind of optimism, no longer a reaction to fear of an asocial state of nature, but one based in the individual's ability to participate in the creative evolution of society and nature.

The message of Bergson's social thought is clear: that we do not respond to the fact of *indetermination* with the fear that leads to the construction of abstract universals, but with the confidence – with *strength* and *joy* as Bergson often says

– that characterises the creative participation in the open future of social evolution.

Note to the Reader

In setting out Bergson's social thought, I will be engaging closely with his work in relation to the sciences as well as with his philosophy. Indeed, I see the two as being inseparable. It is a constant theme of Bergson's work, from his *Introduction to Metaphysics* in 1903 to his Introductions to *La pensée et le mouvant* (currently translated as *The Creative Mind*) in 1922, that science and metaphysics should be practised as two separate disciplines, each with its own method, its own kind of precision, and its own field, and that it is at the border of these two disciplines that the two different directions of thought, intellectual and intuitive, can correct and guide each other. I have attempted to remain as close to this border as possible in writing this thesis, especially when dealing with the more abstract aspects of Bergson's philosophy. However, this has been no easy matter, demanding a critical and reflective engagement with both the philosophical and the scientific literature.

The most important thing I had to remain aware of was that while science and philosophy may be equals according to Bergson's division of labour, the history of science entails a much more irreversible movement than that of philosophy. It would be difficult to find a course in chemistry that looks at arguments for and against the 'four elements theory' as if it were a viable alternative to the periodic table, yet I have actually taught seminars for lecturers who consider arguments 'for' and 'against' Descartes' dualism with no reference whatsoever to its (or our) historical specificity. An awareness of the historical context of Bergson's thought is essential if we are to maintain its contact and dialogue with science today. His views are framed by the science of *his* time, not ours, just as the thought of Descartes and Locke were framed by the science of Galileo, or as that of Kant was framed by the science of Newton. To be sure, Bergson's thought was not modelled on scientific 'facts' – indeed, I think he is quite right to criticise the modern philosophers for exactly this servile attitude –

but it was cached out in terms of scientific debates that have evolved in all sorts of ways since his time. Bergson is not our contemporary unless we critically establish him as such, and the relevance of his philosophy today needs to be demonstrated, not assumed on the basis of its relevance a century ago. If we must alter Bergson's thought somewhat in order to do this, then so much the better. To this end, I will both expand and re-define the vocabulary Bergson utilised in order to better demonstrate the significance of his philosophy within a new intellectual landscape.

A second point I had to be mindful of was that I was not dealing with a border between two homogenous disciplines. I have already mentioned that Bergson considered the moral and social sciences to be closer to metaphysics (in the specific sense that he understands metaphysics) than are the life sciences. It follows from this that the degree to which scientific 'facts' are to be left to science or re-interpreted according to Bergson's metaphysics of time will be different when we are dealing with different sciences. To appreciate the relations between life, matter and consciousness, as well as those between society and individuality, it is imperative to remain aware of the subtlety that Bergson's philosophical method brought to the critique of scientific facts; it goes much further than the generic identification of 'false problems' resulting from science's illegitimate translation of qualities into quantities, continuity into discontinuity, or duration into space that Deleuze reduces it to in his *Bergsonism*. It involves the quantitative identification and preservation of real mechanisms (as identified scientifically) within a qualitative understanding of reality as not itself in principle mechanistic (as identified philosophically). In the end, rather than science and philosophy, we take from Bergson a range of sciences, reflecting the different 'levels' of duration from the 'highest' (consciousness) to the 'lowest' (matter), and each demanding a different degree and kind of re-interpretation depending on their 'proximity' to metaphysics.

This thesis is a working out of the implications that follow from a single question: *what is society in Bergson's universe*? What I am providing, then, is a certain view of Bergson's philosophy as a whole, newly oriented around this central question. In working through this question and its implications, many

details of Bergson's thought, often on quite different topics, are revealed in a new light, as if the kaleidoscope had shifted. With this in mind, I feel I should say something about the nature of my engagement with other studies of Bergson's philosophy. The nature of the thesis, as a certain view of the whole of Bergson's philosophy, minimises the value of engaging with other interpretations of particular details of it. Where a difference is particularly striking, I will account for it with reference to the different projects that give the details their particular colouring (for example, Deleuze's ontological project led him to emphasise a certain 'purity' of duration that my focus on Bergson's social thought led me to de-emphasise), but I refuse to present such a difference as an opposition, let alone as one that must be resolved. As I see it, if different aspects of Bergson's thought are developed in different directions, then that is all the better for 'Bergsonism'! In researching mysticism, the thing that struck me the most after the fact that mystics are as rich and varied in conceptual detail as are philosophers, is that this variety does not lead them to argue among themselves like philosophers do. I follow Bergson in believing that philosophy is – or rather that it can be – the effort to participate in a creative evolution, and above all this means being in sympathy with others who make the same effort. Criticism is reserved for those aspects of the self and of society that inhibit this effort.

Chapter One – The Biological Evolution of Society

This chapter is concerned with establishing a single fact, fundamental to Bergson's social thought: society is a biological reality for Bergson. It evolves alongside individuality and has its own distinct mode of organisation, its own mode of consciousness and its own distinctive relation to matter. This will not, for the most part, involve a discussion of society itself, but of the different methods and principles that have guided the study of life, and the different ways in which they affirm or deny the reality and efficacy of social organisation. In examining the way Bergson's approach establishes this social organisation as a fact, several characteristics of society at the natural level will be revealed. First, that like every living system it is a coherent yet indeterminate multiplicity bearing a deep relation to the broader systems from which it was created by dissociation. Second, that this coherence and indetermination of living systems is functionally homologous even though it is found at what are materially very different levels – individual, social and ecological. Third, society does not, in a biological sense, come after individuality but dissociates from it as two modes of organisation at which the evolution of life settles in the social insects and humans (I will leave until the next chapter the consideration of the social organisation that persists in humans alongside their individuality). The three sections of the chapter will examine three aspects of Bergson's work on biology that are central to his account of society as an active and irreducible level of biological evolution: *organisation*, *unity* and *dissociation*.

In the first section I will bring out the significance of the way in which Bergson prioritises what he calls the 'organisation' of living beings over their materiality, and explain why this provides an essential basis for considering society as an immediately biological reality. This will involve a consideration of Bergson's decision to align life with consciousness rather than matter and an examination of the particular distinction Bergson makes between organised and unorganised matter, taking in his critique of scientific mechanism, and its implications for the field of genetics today.

In section two I will look at the way Bergson uses the terms social and individual to describe the unity and diversity that are present throughout the

natural world. This will involve distancing his concept of *élan vital* from vitalism and emphasising instead its relation to thermodynamics, in order to examine the nature of the real, as opposed to the abstract, unity that is fundamental to an understanding of how social organisation can be considered to be just as real and efficacious as the far more 'solid' individual organisation.

In section three I will examine Bergson's claim that life works by dissociation, and trace the history of evolution that he develops on this basis. The notion of evolution through dissociation is fundamental to Bergson's social thought. As a divergent, rather than a linear model, it allows him to place the biological evolution of society alongside that of individuality. This will involve an examination of those cases in which the 'action of' the individual is inexplicable unless referred to a broader level of social or ecological organisation that 'acts them' so to speak. This will lead to the question of the interaction between the individual and society in cultural evolution in the next chapter.

The Organisation of Living Systems

When Bergson prioritises what he calls the 'organisation' of living beings over their materiality, he establishes an essential basis for considering society as an immediately biological reality. If the solidity of the body were fundamental, society could only be an inefficacious abstract unity, or what Bergson calls a 'discrete multiplicity', and the social organisation of organisms could always be brought back to the individual as its fundamental component. However, it is important to note that the irreducibility of the whole does not entail the reverse, and mean that the parts themselves are abstract and inefficacious. Bergson is merely doing away with the metaphysical hypothesis that *only* the individual is real and efficacious, a hypothesis that arises naturally out of the intellectual reduction of real processes to discrete elements. In prioritising organisation over materiality Bergson opens the way to an understanding of the real efficacy of both society and individuals. It is the dynamics of the living system as an open whole that preserves multiple levels of causality: *its* freedom and efficacy, the freedom and efficacy of its *parts*, and the influence of *wider levels* of

organisation of which it is in turn a part. The key issues for Bergson's social thought arising from this section will be:

- a critique of the reductionist tendency of scientific mechanism which removes the most general obstacle to recognising the biological reality and efficacy of society (we will see that this reductionism works differently at the level of the organism and of the gene)
- a general model of the organisation of living systems in which there is a real efficacy of both the parts and the whole rather than a linear determination that renders one side reducible to the other (such a model may be applied to a cell, an organism, a society or an ecosystem)
- a recognition that the distinctive organisation of a living system is due to its intrinsic relation to the broader systems of which it is a part, and which are the essential source of its internal organisation

In proposing this view of life, Bergson was setting himself in opposition to the scientific mechanism that had dominated biological thought since the scientific revolution, and which still dominates it today, but he was only doing so insofar as he identified a dogmatic metaphysics at work in the hypothesis of universal mechanism. Bergson's commitment in *Creative Evolution* to universal duration opposes this hypothesis without dismissing the facts it is based on. If an organism is "a portion of extension bound up with the rest of extension, […] subject to the same physical and chemical laws that govern any and every portion of matter" (CE 8; O 504), then the role of science remains the study of the actual mechanisms that are at work in an evolution that is not *in principle* mechanistic. The difference is that in the absence of universal mechanism, an organism must be more than just an assemblage of actual mechanisms, and since the role of science is limited to the study of the extended physico-chemical body, there is a role for philosophy in the study of this 'excess' that constitutes life. It is in relation to this positive task of philosophy that Bergson sets himself in opposition to the vitalism and finalism that we will examine in the next sections. For now, let us note that Bergson seeks a precision in the philosophical study of life that is equal to that which science brings to the study of matter, and developing this

means avoiding any transcendent life-force, will or purpose. In performing its role, philosophy will both be guided by, and reveal the significance of, the actual mechanisms that science observes.

Bergson's approach to Biology

It is with reference to a single fact that Bergson both undermines universal mechanism and validates the observation of particular mechanisms: the intellect is an adaptation of the human animal to its material environment, it is "a flame, perhaps accidental, which lights up the comings and goings of living beings in the narrow passage open to their action" and not "a sun which can illuminate the world" (CE *xxxvi*; O 490). For Bergson, this renders intellectual knowledge both relative and real due to a remarkable reversal, it is not knowledge that is relative to the intellect (which would place the reality of objects in question), it is the intellect that is relative to matter (which raises the question of the real genesis of objectivity). The intellect effaces from an aspect of the real all that is not relevent to the needs of our body: the object is "cut out of the stuff of nature by our *perception*, and the scissors follow, in some way, the marking of lines along which action might be taken" (CE 8; O 504). However, this does not mean that material objects are relative to the mind in the sense that they were for the modern empiricists, whose representationalism raised the problem of whether the idea resembled the real object, nor in the sense that they were for Kant, whose transcendentalism guaranteed resemblance between concept and object at the cost of rendering the object itself relative, and the thing-in-itself unknowable. For Bergson, the intellect is an adaptation, a faculty of action, not speculation, and "action cannot move in the unreal" (CE *xxxvi*; O 490). Hence, Bergson describes a single process, in which the material object is 'cut out' of the continuity of the real, and the intellect is 'cut out' of consciousness: "an identical process must have cut out matter and the intellect, at the same time, from a stuff that contained both" (CE 128, see also 140 & 172; O 664, 697 & 722). It is in this sense that the intellect is relative not to matter, but to the real dissociation that evolution brought about between it and matter: "knowledge ceases to be a product of the intellect and becomes, in a certain sense, part and parcel of reality"

(CE 99; O 624). It expresses the degree of real discontinuity, and therefore real freedom, that the organism has within its environment. Rather than saying it has been 'cut out' of consciousness, we could say it has been 'naturally selected' as that aspect of consciousess that is best able to 'cut out' objects from matter. We will look in some detail in section three at how this adaptation reflects the individuation of the human within its environment in the course of its evolution. For now, we need only note that Bergson grounds the verity of our intellectual knowledge of matter in the relativity of the intellect *to* matter.

What are the consequences of this for science? As the discipline that develops our intellectual knowledge, it too will be relative to the intellect, and for this reason grasp the reality of the matter the intellect is adapted to: "the causality it seeks and finds everywhere expresses the very mechanism of our industry […] the finality it understands best is the finality of our industry" (CE 106; O 634). However, it takes centuries of culture to produce the mathematical ideal of a universal mechanism, and this brings absolute precision to what is merely an intellectual *tendency*. Nevertheless, it remains the ideal that mechanistic science holds above its observations. We do not *experience* atomistic bodies in geometrical space: "from our first glance at the world, before we even make out *bodies* in it, we distinguish *qualities*" (CE 192; O 749, Bergson's italics). This is what is given in experience, and it can be developed in two directions: the intellect can "mark out the boundaries of bodies [in this] continuity of sensible qualities" (CE 193; O 750); intuition however, is under no such obligation. The specific problem for biology is that there is no principle within such a science by which the living being can be distinguished from a material object, and what is distinctive about the organisation of the living body escapes it: "organisation can only be studied scientifically if the organised body has first been likened to a machine" (CE 60; O 574). I will return to this point in some detail. First, let us consider the alternative mode of knowledge that Bergson describes on the same basis.

If the intellect is an adaptation of consciousness to its environment, then it is not the whole of consciousness. However much it may dominate our thinking (and indeed, what need have we to be aware of the ways in which we are not discontinuous, but *continuous* with our environment?), it does not exhaust the possibilities for what we can think – perhaps better to say for *how* we can

think. Thus, Bergson's positive contribution to biology, as to methodology in general, lies in the indication of an alternative to the intellect itself: there remains "around our conceptual and logical thought, a vague nebulosity, made of the very substance out of which has been formed the luminous nucleus that we call the intellect" (CE *xxxvii*; O 492). This fact is at the root of Bergson's appeal to experience, of which matter is only the aspect that intellect is drawn to focus on. We may not be able to think about continuity, but it is given in experience none the less, or rather, experience is given in it. And if the experience of living beings is not limited to that of a material object or 'machine' that excludes life, then our knowledge of them need not be limited to the intellectual representation of organisms in this mechanistic way. A deeper choice is presented to us in the immediate experience of the 'strange objects' (as Jaques Monod has called them) that stand out against the background of matter in general. *Experience reveals that living things have a fundamentally double nature: they are life and matter*. Corresponding to this double nature of living things as both life and matter, there is a double nature of consciousness as intuition and intellect, and so the experience of them presents us with a choice. As we will see, it is a choice that mechanistic biologists remained unconcious of having already made when they believed it was possible to adequately grasp life with concepts that are modelled on matter.

So we come to this conclusion: there is a double nature of living beings which indicates two entirely different methods, intellect and intuition, applied to two entirely different fields of study, matter and life. The intellect can know with mathematical certainty, but it is gained at the cost of excluding those aspects of reality that do not fit into its static framework. The kind of knowledge we can have through intuition, on the other hand, is *probabilistic*. It grasps the life of things that the intellect effaces, yet the very fact that this life goes on evolving – and this is the first thing Bergson says in *Creative Evolution*: "the evolution of life, *incomplete as it yet is*" (CE *xxxv*; O 489, my italics) – makes a comprehensive explanation impossible, necessitating a perpetual evolution on the part of the thought that wishes to grasp it (on this point see Mullarkey 1999: introduction). However, while the intellectual study of matter has been developed since the physicists of ancient Greece sought a single natural substance to which they could relate all others, the intuitive study of life (and

consciousness) is something Bergson was still fighting to establish just one century ago. Before looking at how the intellect applied itself to the study of life, and why it was inadequate to the task, let us summarise the proper division of labour between intellect and intuition, or science and philosophy, as Bergson understands it.

When Bergson speaks of two sides of the absolute, he is acknowledging both real continuity and real discontinuity. The choice between intellect and intuition is ultimately a choice between *two relations* between the self and the other, the knower and the known (I will return to this in section three when we look at the intellect in its evolutionary context). *Insofar as there is real continuity between living beings, as between all things, we can know them intuitively. Insofar as there is real discontinuity between living beings we can know them intellectually.* The main advantage of Bergson's approach over the mechanistic approach lies in the fact that the choice between intuition and intellect is not symmetrical. While an intellectual grasp of the living being *excludes* the apprehension of all but an abstract concept of life (an idea of a transcendent life-force, an animating will or a purpose), an intuitive grasp of the living being *includes* its relation to matter, both its own body and its environment, as an important aspect of the dynamics of its organisation. That is to say, given life, we already have matter, but given matter, we can in no way get life out of it. This becomes evident when Bergson demonstrates the way mechanism and finalism fail to account for facts of convergence, instinctual behaviour and symbiotic relations. If we can speak of an advantage of intuition over intellect, then, it lies in this: that intuition does not efface half of the real as the intellect does, and as such it preserves a role for intellect itself, whereas intellect in its denial of life also disenfranchises intuition. Let us turn now to the history of this disenfranchisement.

The Critique of Mechanism

For Bergson, as for many contemporary biologists who are currently re-assessing the mechanistic assumptions that still survive in biology today, it is Galileo who created modern science by suggesting that only that which can be measured is

real (see Goodwin 2007: chapter one). In his essay *The Assayer* of 1632 he claimed that any non-mathematical qualities of objects only exist in the subjective experience of the observer (a distinction that Locke would reproduce and expand in terms of primary and secondary qualities in his *Essay on Human Understanding* of 1690), and that objective reality consists essentially of solidity and motion: corpuscles in motion according to fixed laws (the most fundamental of which, the law of inertia, even renders motion itself contingent). Descartes was one of the first to formally set out the epistemology of Galileo's new science, which he adhered to in his research from the *Treatise on Man* (written 1629-43), through to the *Description of the Human Body* (written 1647-8). Despite his commitment to mechanism in the study of matter, Descartes remained convinced of the freedom of the will in his study of consciousness.[11] Given this dualism, the question of how to approach the study of living organisms became *to which type of substance, spiritual or corporeal, do living organisms belong*? For Descartes, who (albeit as a thought experiment) doubted that the figures outside his window were conscious, there could be no good reason for attributing a soul to animals, they must therefore fall under the category of a corporeal substance. The essence of animals and plants was nothing more than matter in motion: living organisms are mechanical.

I want to point out two things about this seventeenth century mechanism. The first is that it has always been criticised for failing to account for life. At its very inception, Arnauld objected to the viability of Descartes' assertion that we can account for animal behaviour without recourse to a soul; Berkeley's rejection of a material substratum was focussed on the notion of inertia as an inadequate conception of a substance that is supposed to be able to 'cause' perceptions; and towards the end of the modern period a whole host of objections sprang up as research in embryology revealed more and more that the growth of organisms is not mechanical. – Second, although mechanism remained in principle objective, the language it uses was always steeped in vitalism. Descartes makes numerous references to 'animal spirits'. For example, in reply to Arnauld he writes: "we know of absolutely no principle of movement in animals apart from the disposition of their organs and the continual flow of the spirits which are produced by the heat of the heart as it rarefies the blood" (*Objections and Replies* 4, 1), and in the *Discourse on Method* we find that movement follows from "the

generation of the animal spirits" (*Discourse on Method* 5). There is a similarly vitalist tone to some of William Harvey's writings. In his *Circulation of the Blood* (1628) Harvey uses a straightforward mechanistic model to investigate the workings of the heart, but he still speaks in terms of vital forces. He refers to "blood, which is warm, perfect, vaporous, full of spirit" or "fraught with spirits" and says that the blood returns to the heart "to recover its perfection" for "the heart is the beginning of life" (cited in Gribbin 2002: 30-1). We should not read too much into what appears to be a language of vitalism, however. Descartes and his contemporaries would have understood 'animal spirits' themselves in material terms, as a substance composed of very small, fast-moving particles, and if animal spirits remain material in their essence, animals themselves remain subject to a mechanical analysis. Their organisation is reducible to the interaction of their ultimate parts according to the same fixed laws that govern all matter.

Practical considerations are also fundamental to the mechanistic direction that biology has taken, first because of certain constraints as to what it is possible to study scientifically and second, because of the practical ends to which theoretical work is ultimately always a means. The dynamic organisation that characterises living things can be ignored in practice (and consequently rejected in theory). In so far as organisms are material, that is to say, quite straightforwardly, in so far as they have bodies, they lend themselves to a scientific analysis: we can treat them like objects! Yet in doing so, we learn nothing of life. The biologist Mae-Wan Ho has suggested that the practicalities of laboratory research may for a long time have conditioned this limitation of biology to the study of the exclusively material properties of living things. In a refreshingly pragmatic piece of criticism, she points out that for a long time biologists literally studied dead bodies rather than living ones:

> We have nothing like living systems that we could set up or test in the laboratory. There is a serious point here that impinges on the methods and technologies we use in science. Until quite recently, the typical way to study living organisms was to kill and fix them, or smash them up into pieces until nothing is left of the organisation that we are supposed to be studying. This has merely reinforced the Newtonian mechanical view of organisms that has proved thoroughly inadequate to account for life. (Ho 1998, 4-5)

For Ho, as for Bergson, the usual methods of biology are inadequate because they only pertain to living things in so far as they are material. I would add, they are even more inadequate because they only pertain to living beings in so far as they are individual. In the introduction to his edited volume *The Sociobiology Debate* Arthur L. Caplan suggests that the priority of the individual over society in biology is entirely relative to the experimental limits of mechanistic science. He suggests that biologists have concentrated on the 'hard' characteristics of organisms such as anatomy and physiology in attempting to explain their evolution because the 'soft' characteristic of behaviour is "difficult to measure and particularly troublesome to reconstruct" (Caplan 1978: 4). The technical difficulties of carrying out empirical studies on behaviour have diverted evolutionary attention away from the social and towards the view that the individual alone is efficacious (Caplan 1978: 4). It would seem, then, even from this brief consideration of method, and before we trace their development along two different lines of evolution in section three, that *the individual is not biologically prior to the social, it is just more readily translated into material terms; hence it takes priority for the intellect and for mechanistic science.*

There are two aspects of Bergson's critique of mechanistic knowledge that could be taken even further today. First, Bergson's opposition to a "radical mechanism" that "implies a metaphysic in which the totality of the real is postulated complete in eternity, and in which the apparent duration of things expresses only the infirmity of a mind that cannot know everything at once" (CE 25; O 527) can today be extended to certain aspects of matter itself: for example, the sub-atomic level of matter as revealed in quantum physics and certain types of large-scale events such as weather systems (see Goodwin 2007: 33-6). Second, while Bergson stuck with the epistemological criticism that mechanism becomes "less and less objective, more and more symbolical, to the extent that it goes from the physical to the vital" (CE 229; O 798), biologists today add the practical criticism that when we attempt to re-organise natural processes according to mechanism's symbolical model (through practices such as genetic modification and monocultural farming) we don't merely efface but actually disrupt its real organisation (see Goodwin 2007 and Ho 1998). This certainly sheds a new light on statements such as "positive science can and should proceed

as if organisation was like making a machine" (CE 60; O 574), and one wonders if the Bergson of *The Two Sources of Morality and Religion* could have said the same. I will return to the implications for matter in the next section, and to this ethical question in the second part of the conclusion.

How, then, does Bergson distinguish organic from inorganic matter? In fact, there are three ways in which Bergson describes the difference between them, each of which contributes something to the account of the organization of the living being: the nature of change in each case, the relation to an observer, and the relation to the environment. The conclusion he reaches is that the living being, like consciousness and like the universe, endures. Before considering these three points, let us look at the basis of Bergson's distinction between living beings and material objects – his decision, to draw an analogy between the organism and consciousness.

The first thing Bergson does in *Creative Evolution* is draw an analogy between the conscious being, the living being and the whole universe: "like the universe as a whole, like each conscious being taken separately, the organism which lives is a thing that *endures*" – he describes this duration as "the essential character of organisation" (CE 10; O 507). This decision to draw an analogy between life and consciousness is the opposite of Descartes' decision to regard the organism as a machine; it is the first step in developing an intuitive understanding of life. So what exactly is Bergson affirming of an organism when he draws an analogy with consciousness, rather than with matter? Most fundamentally for Bergson, consciousness signified freedom (following *Time and Free Will*) and memory (following *Matter and Memory*). It is holistic and indeterminate rather than atomistic and determined. It is intrinsically active whereas matter is inert. What memory signifies in both cases (life and consciousness) is the preservation of the past into the present in a way that is efficacious – there is a kind of 'action at a distance' but over time, contrary to the contiguity of cause and effect that defined mechanical causality, and again it is the whole of the past, not just the last moment, that effects the present. Where it differs is in that while consciousness can only live one life, and must therefore constantly filter out all but the memory (or area of memory) that fits into the present context, life can work through any number of alternatives simultaneously on different lines of evolution.[12]

Bergson found strong evidence in biology for the notion that life works by dissociation. Embryology and cytology were important for Bergson because they suggest "a reality which *endures* inwardly" (CE 232; O 802), and more specifically because they show that life proceeds "by dissociation and division" and hence goes to work in a very different way than the human intellect, which can only conceive of creation as an association of discrete elements (CE 58; O 571). On the basis of the evidence of embryology and cytology, Bergson claims that the work of evolution "is not intelligent, in the human sense of the word" (CE 59; O 573). The problem is that while "manufacturing is peculiar to man" we nevertheless attribute it to nature because the intellect "cannot help conceiving organisation as manufacturing" (CE 59; O 573). To manufacture, though, is to build up a whole through the addition of parts according to a certain design, whereas biological organisation is the production of parts where there previously were none. This is why Bergson is able to claim that the intellectual problem of how an organ as complex as the eye was made is badly formulated: "the eye, with its marvellous complexity of structure, may be only the simple act of vision, divided *for us* into a mosaic of cells, whose order seems marvellous to us because we have conceived the whole as an assemblage" (CE 59; O 572).[13] While science studies the eye by focussing on its complexity, philosophy seeks the essence of its evolution, which is of a different nature. However, where this essence has been construed in abstract terms, Bergson seeks a concrete organising unity.

If the ultimate aim is to move from a relative to an absolute knowledge of another organism, another species, then the practical problem is that of how the partial and relative views of empirical research are to be re-integrated into the whole with which they were conceptually isolated. For Bergson, this re-integration is the essential work of philosophy, and the facts that we start from are of vital importance. In order to gain a metaphysical knowledge of organisms we should not discard the facts of science, but re-integrate them into the evolution that they are abstracted from. In this sense, metaphysics no longer seeks a reality behind appearances, but a re-integration of appearances into reality; in this way we can discern life through the study of matter: "vitality is tangent, at any and every point, to physical and chemical forces" (CE 20; O 521). Bergson claims that in such a project a *mechanics of translation* that defines

physico-chemical states of an organism "would become a particular case" of a *mechanics of transformation* that re-integrates those states in the vital movement of evolution (CE 21; O 522).

Let us return to the point that Bergson's particular focus is on the different nature of change in objects and organisms. Matter changes under the action of an external force, while duration bears change within itself as its essential nature; matter is decomposable into discrete parts, while duration is simple, and only potentially contains discrete parts; any change in matter is reducible to a rearrangement of parts and therefore reversible, while change in duration is creative, indeterminate and irreversible (CE 4; O 499-500). However, while matter is defined by the tendency to constitute isolable systems, the isolation is never complete. It is science that goes to the end and isolates systems completely for the convenience of study, but Bergson points out that the "so-called isolated system" always remains open to certain external influences (CE 7; O 503). The most determinate of material systems, isolated by the most strictly controlled of experimental practices always remain attached by a "doubtless very tenuous" thread to duration: "it is along this thread that is transmitted down to the smallest particle of the world in which we live the duration immanent to the whole of the universe" (CE 7; O 503). It is not matter itself that actually lacks duration, then, but the scientifically isolable aspects of matter that to all intents and purposes might as well lack duration: "there is no reason why a duration… should not be attributed to the systems that science isolates, provided such systems are reintegrated into the Whole" (CE 7; O 503).

This brings us back to the third term in Bergson's analogy between life and consciousness: what does the extension of the analogy to include 'the whole' of matter contribute? Immediately it implies the rather strange fact that a material object is disanalogous with matter as a whole. However, this is revealing of an important fact about the inability of the intellect to adequately represent life. Recall that for Bergson an object is the result of a contraction that consciousness performs on an area of what in reality is an indivisible continuity or universal interaction. It only has a relative existence. Now clearly this is not the case with matter as a whole, and nor is it the case with a living being: "while the organized being is cut out from the general mass of matter by his very organization, that is to say naturally, it is our perception which cuts inert matter

into distinct bodies" (CE 146; O 688). Now, the fact that a living being is cut out already by its own organisation does not mean there is a correlation with the intellect that cuts objects out of matter. The nature of the cutting is different in each case. When we cut out an object, a whole metaphysics is implied, an atomism in which the discrete nature of the object itself within the world is mirrored by its divisibility. The organised being, on the other hand, has "unlike parts that complete each other" and performs "diverse functions that involve each other" (CE 8; O 504). Now, the fact that these internal qualities of the organism 'complete' and 'involve' each other are enough to mark it out as profoundly different to a machine, but the essential point is that their explanation is not to be found in their relation to each other but in the dual relation to their environment (insofar as they are adapted to it) and the evolutionary process that differentiated them within it (insofar as they are aspects of an ultimately creative process). It is this external relation that is reflected in the different kind of organisation evident internally, to the extent that simply by taking it as a discrete thing, science deforms the internal dynamics of the organism: "we cannot describe the outward appearance of the object without prejudging its inner nature and its organization" (CE 126; O 660). When science isolates the material object, on the other hand, it effaces at most "the thread" that connects it to universal duration. The degree to which matter has duration can be isolated in practice without distorting its nature.

Insofar as the complication of parts and functions represent the adaptation of the organism to its environment, the intellect (an adaptation to its environment) can grasp one side of its nature, the side that is determined to establish certain extrinsic relations to matter to make up for its individuation within life: "for us, the whole of an organised machine may, strictly speaking, represent the whole of the organising work […] yet the parts of the machine do not correspond to the parts of the work, because the materiality of this machine does not represent a sum of means employed but a sum of obstacles avoided: it is a negation rather than a positive reality" (CE 60; O 575). In this way, Bergson re-states the metaphysical problem of life so that it no longer entails a different kind of existence beyond the material, but just a different kind of relation to the whole: "the only question is whether the natural systems which we call living beings must be assimilated to the artificial systems that science cuts out within inert matter, or whether they must not rather be compared to that natural system

which is the whole of the universe" (CE 20; O 520). The problem is the relativity of our knowledge. If it does little damage to material objects by isolating them from their context, it is because the contribution their context makes to what they are and do is negligible in the first place and easily isolated in practice. The root of the misrepresentation of life is that living beings too are easily isolated in practice, but because their relation to their context is deeply constitutive of what they are, their nature is deeply distorted by such isolation. While our knowledge of their materiality may be advanced by such research, our knowledge of their life is not.

Bergson and Genetics

We have seen how Bergson distinguishes the living being from the mechanical object of mechanism by identifying the different kind of organisation at work in each. Central to this organisation is the fact that there is no fundamental, self-identical unit in living beings, nor are those beings themselves self-identical within their environment or within evolution: life grows by dividing, what was one will now, literally be two. In order to prioritise the real organisation that reflects the actual dynamics of life, and not the dynamics that are constructed symbolically on the basis of a mechanics, Bergson focuses on the potentiality of the cell, species (and in some cases organism) to divide, rather than its actual unity for an observer. He conceives of life and living things a virtual multiplicity, much like consciousness. Today, however, the understanding of why both an organism and evolution develop the way they do is dominated by genetics. The internal principle of variation that had always escaped Darwin, who in the end half-accepted a kind of Lamarckian heredity as the best available hypothesis, was provided by what is known as the 'modern synthesis' of Darwinian natural selection with Mendelian genetic variation (see Huxley 1942). In the context of genetics, the mechanistic hypothesis (the intellectual tendency) survives in the form of determinism: the view that the 'discrete multiplicity' of the genes contains the 'blueprint' for the organism. As was the case with mechanism, the whole is seen to be ineffective, and any change is brought back to the action of its 'parts'. I will briefly consider the hypothesis underlying this

view and the problems it raises, before suggesting that current holistic approaches to genetics are entirely consistent with Bergson's methodology: they recognise a real efficacy of the whole organism and replace the genome in its total context in order to distinguish the real action of the parts from their Intellectual representation. Is the 'fluid genome' of contemporary biology an example of Bergson's virtual multiplicity? Let us see how this encounter between Bergson and genetics will work out.

The modern synthesis gave rise to what is known as 'the central dogma of molecular biology', the idea that evolution occurs by the natural selection of random genetic mutations. On such a view, the organism is reduced to a vehicle that is itself of no evolutionary consequence, first due to its passivity, and second due to a shift of focus from genes to populations (and this shift has the opposite effect to recognising a real efficacy of society). In Bergson's terms, this view repeats the mechanistic metaphysics of the seventeenth century: (1) the genome is a discrete multiplicity, (2) its parts alone are effective, and (3) the whole is an abstract unity functioning only as a marker of the unit of selection. Richard Dawkins' *The Selfish Gene* was the text that popularised this view in the nineteen seventies: "the argument of this book is that we, and all other animals, are machines created by our genes" (Dawkins 2006: 2). It was Dawkins' project to show that individual traits, in particular altruism, were the product of a purely chemical process of genetic mutation, a fundamental cause of variation that is blind to what it does. In the same decade, Edward O. Wilson was to perform exactly the same task with regards to social rather than individual behaviour in his *Sociobiology: The New Synthesis* (see Wilson 1974). The immediate effect of these hypotheses that there is a one-way, linear causality running from gene to organism is to render social organisation completely ineffective: it is an effect of genetic 'programming', not a cause. Indeed, the same goes for individual agency, as the question of individual or group selection that had dominated neo-Darwinian theories is subsumed, in the modern synthesis, under a single homogenous model of gene selection, working at the level of the 'population'. Population genetics, primarily developed by J. B. S. Haldane, Sewall Wright and R. A. Fisher, foregrounded the recording through quantitative analysis of the 'gene frequencies' in a population. In founding texts such as R. A. Fisher's *The Genetical Theory of Natural Selection* (1930), the genome is still conceived of as

a discrete multiplicity; it is merely applied at the level of the species rather than the individual in a way that does not fundamentally challenge the conception of the genome itself. So what actually are genes, and do they behave the way Dawkins and Wilson describe?

In physical terms, there is no such thing as 'a gene' if by this we mean a discrete material object. The DNA molecule is just a string of four different kinds of smaller nucleotide molecules, conventionally called *A*, *T*, *C* and *G*, within which certain symbols mark the start and end of the sequence that we call a gene. However, these symbols are written in the same four-letter alphabet as the 'gene' itself. What is important is not the nucleotides themselves – an *A* nucleotide is the same in a human as it is in a plant – but the sequence in which they are organised. In functional terms, it is not the case that a single gene has a single phenotypic effect, genes work in combinations and their activity is context dependent: a gene will behave differently based on its proximity to other genes and on the proteins and enzymes that are present in the cytoplasm (see Goodwin 1994, Ho 1993 & 1998 and Noble 2006). Genes are neither self-identical nor straightforwardly causal: the genome is not a discrete multiplicity just as the organism is not a machine.

Nevertheless, our ability to identify discrete genes on the one hand, and instances of causality in their role in the production of proteins on the other, has led thinkers such as Dawkins to interpret them as the root cause of every organic event: "genes do indirectly control the manufacture of bodies and the influence is strictly one way" (Dawkins 2006: 23). Hence, the growth of the organism is given in advance: "DNA can be regarded as a set of instructions for how to make a body, written in the *A*, *T*, *C*, *G*, alphabet of the nucleotides" (Dawkins 2006: 22).[14] From this metaphor we derive the analogy of the genome with a computer program, but as we have seen, the organism and even the cell is not a machine like a computer; it is a real whole that itself affects the behaviour of the parts it includes. Denis Noble is one biologist who claims any metaphors that would attribute causal agency exclusively to genes, as if they "control," "determine," "code for," or "contain" organic events in advance of their realization are inadequate to an understanding of the real dynamics of living systems: "there is no such program and there is no privileged level of causality in biological systems." (Noble 2006: *xii*). Indeed, it is in the use of such metaphors that

Bergson says science is stepping outside its proper domain of observing mechanisms, and into an unconscious metaphysics that posits universal mechanism, or, in this case, genetic determinism. Thus, while one cannot speak at all about genes without using metaphors, one can at least use them knowingly, and based on an intuitive effort to re-integrate actual mechanisms into the real whole that articulates them. It is in exactly these terms that a number of biologists today have developed a critique of the determinist hypothesis that reproduces very closely Bergson's method. For example, Brian Goodwin writes:

> Organisms have been replaced by genes and their products as the basic elements of biological reality. […] There is no lack of highly persuasive books whose objective is to demonstrate why organisms are not what they seem to be – integrated entities with lives and natures of their own – but complex molecular machines controlled by the genes carried within them. […] It is the absence of any theory of organisms as distinctive entities in their own right, with a characteristic type of dynamic order and organization, that has resulted in their disappearance from the basic conceptual structure of modern biology. (Goodwin 1994: *ix-x*)

For Goodwin, evolution is not the realization of a genetic program, but a dynamic process of emergent order (morphogenesis) "in which genes play a significant but limited role" (Goodwin 1994: *xiii*). It is an approach that, like Bergson's, in re-integrating the quantitative facts of scientific analysis into the qualitative process that is their true context results in a view of life and living things as essentially creative processes: "in an extended view of the living process, the focus shifts from inheritance and natural selection to creative emergence as the central quality of the evolutionary process; […] inheritance and natural selection continue to play significant roles in this expanded biology, but they become parts of a more comprehensive dynamical theory of life which is focused on the dynamics of emergent processes" (Goodwin 1994: *xiii*).

Thus, by rejecting what is hypothetical in the deterministic view of the genome – its nature as a blueprint or discrete multiplicity that is both blind to and unaffected by what it does – modern biology has drawn very close to a view of the gene as a participant in a creative evolution, but how far can we take the analogy? Remaining at the level of the organism (I will ask the same question of life as a whole in the next section), let us ask whether the 'fluid genome', as it

has come to be called, constitutes a virtual multiplicity in Bergson's terms. The instability of genetic material is widely recognized in biology; I will use here the account of it that is given by Mae-Wan Ho, partly because of the clarity of her account, and partly because her thinking has been deeply influenced by a long acquaintance with Bergson's work.[15] For Ho, the fluidity and adaptability of the whole, as opposed to the strict regimentation of parts "is the essence of organic stability as opposed to mechanical stability" (Ho 1998: 102). Taking into account the total context of the genetic activity, Ho is lead to define the genome (in all but name) as a virtual multiplicity: "the gene itself has no well-defined continuity or boundaries, the expression of each gene being ultimately dependent on, and entangled with, every other gene in the genome" (Ho 1998: 104). This model of de-localised, entangled genes not only resembles a virtual multiplicity in its internal dynamics, nor even in the fact that its activity is necessarily, and indeterminately temporal; it is also its openness to the wider creative processes of which it is a part: "the DNA sequence by itself can do nothing, as it depends on enzymes and other proteins interacting with it to be replicated, and to be transcribed" (Ho 1998: 106). What is more, the fluidity of the genome itself is reflected in the fluidity of inheritance: "certain cellular states, or gene-expression states, are heritable quite independently of changes in DNA or RNA" (Ho 1998: 103). Indeed, Ho is among a number of biologists who remind us that it is not the DNA alone, but the entire zygote cell that we inherit from our parents. The supposed impermeability of the genetic material that Weismann had established and which became a major premise of the central dogma is no longer held to be true. This does not mean that genes are not still of immense importance, just that we need to interpret them differently, away from discrete causal models, in terms of robust centers of individuation, as products rather than producers of evolutionary change. If they appear to produce it, it is because within an ultimately creative process, they pertain to what is actually determinate.

To conclude, we can say that the genome shares the same fundamental characteristics with Bergson's virtual multiplicity: (1) the whole is efficacious, since its action is irreducible to that of its parts; (2) the real efficacy of its parts are revealed when we take into account the whole context; (3) its future is not given in its present; (4) the indetermination of its inner organisation is inseparable from the broader processes of which it in turn is a part; and (5) it thus

participates in a wider creative evolution. Since creativity cannot be produced on the basis of static conditions, these points suggest that, like the organism, the inner creativity of the genome is due to its differentiation in a prior, or broader level of creative organisation, which, as we will see in the next sections, divides in order to grow. This tendency of a virtual multiplicity to point outside itself to an even broader virtual multiplicity is what will lead us to observe, in the next sections, the real efficacy not only of a social, but also of an ecological level of biological organisation: "vital phenomena, properly so called, or facts of organic creation, open up to us, when we analyse them, the perspective of an analysis passing away to infinity" (CE 145; O 687). What coherence there is between the parts, at each level, is the end result of a creation that produces the whole by a process of differentiation within a greater whole. This at the same time suggests that DNA can neither be a cause of individual or social organisation, except in the sense that it expresses the regularity that a fundamentally creative organisation takes on as it complicates itself. In Bergson's terms, DNA is exemplary of life's search for individuality, expressed in the degree of real discontinuity between the organism and its environment on the one hand, and in the degree of continuity of the organisms' internal environment on the other (the 'robustness' of its genes).

The Unity of Life

So far, we have established that the biological organisation of living systems is irreducible to its material parts and consequently there is, in principle, no barrier to it taking place at the social as well as the individual level. We have, however, considered living systems mainly with reference to particular organisms. It is time to broaden the horizon of our discussion to the evolution of life in general, in order to focus on the unity of life that persists among the multiplicity of particular systems it develops into. Aside from its irreducible reality, the key fact about social organisation is its efficacy, the way that it articulates the individuals that it contains. In order that we can consider society as a real level of biological organisation, we must establish that there is an active unity on the part of life itself, able to articulate species, groups and individuals. This active

unity is Bergson's famous *élan vital*, and we will see in this section how it may contribute to an understanding of society. The key points in this section for Bergson's social thought are:

- the unity of life persists and remains efficacious across the variety of directions its evolution divides into, suggesting the co-existence of different levels of organisation within each other
- life is a volatile and explosive unity, resulting in the constitution of relatively independent systems within itself; since its creative impulse continues by continually dissociating itself within its environment we arrive at the slightly paradoxical formulation that the more levels contain and articulate a living system, the more free it is
- this unity raises the question of the place of humanity in nature, and implies that while it is our individual organisation that defines what we actually are, it is our continued participation in the organisation of life that defines what we potentially can be

The examination of Bergson's views on the unity of life reveals that it is not just scientific mechanism, but its finalist, vitalist and animist opponents that efface real social organisation. Despite their opposition to mechanism these too are products of the intellectual representation of living beings. They may not reduce life to its material parts, they may even renounce such a reduction, but they are only able to oppose it with reference to an abstract, sometimes even transcendent, unity – an ideal thread on which to string the discrete entities mechanism observes, as Bergson often says. In this respect they arise from the geometrical space that the intellect posits in dealing with discrete entities; if the entities are organisms, the space is called 'life', yet it is an abstract concept that does not address the real efficacy life displays, or the way it articulates real organisms. On such a view, relations can only be extrinsic, and organisation is placed above matter in a way that makes its efficacy incomprehensible.

In examining these views, we will be occupied with Bergson's critique of metaphysics rather than science. As we saw in the previous section, mechanism is refuted in its dogmatic hypotheses and affirmed in its particular observations,

which only need to be re-integrated into the real whole. It is left to science to study them, and to science and philosophy together to consult on their re-integration. Bergson's relation to the theories we now turn to is far more ambiguous, and must be traced with great care. First, they share certain key commitments with Bergson: they claim that mechanism provides an inadequate account of living beings, they affirm the reality of life as something distinct from matter, and they attempt (although without much success) to describe the relation between them. Second, Bergson seems to adopt aspects of all of them: he states that his view on evolution is a kind of modified finalism, he uses the term *élan vital* which immediately suggests vitalism, and his descriptions of life as a single wave traversing all matter resembles animism. The fundamental similarity between Bergson and these theories is their common affirmation that life is irreducible to matter. The decisive difference between them is that, while they do so intellectually and the various theories of life they arrive at remain abstract and are affirmed dogmatically, Bergson does so intuitively based in a non-mechanical understanding of the physico-chemical aspect of organisms; that is to say, an understanding that does not force life 'outside' matter.

Élan vital

In examining the *élan vital* I will foreground the two aspects that are essential to Bergson's conception of both biological and cultural evolution: the explosive push that life bears within itself and the persistent unity that it preserves among the various lines of its development. In order to understand the concrete nature of this impetus and this unity, Bergson's concept of *élan vital* needs to be distinguished very strictly from the abstract life-force of vitalism. In the era of biology that preceded debates about evolution vitalism arose twice, first in the mid-seventeenth century and then again around the late eighteenth, both times in the context of the apparent observation of the 'spontaneous generation' of organisms in the laboratory (the first time it was maggots appearing in meat, the second time it was bacteria appearing in substances like blood or urine). Both times it was decisively silenced by advances in microscope technology that enabled scientists to identify the material conditions of the appearance of these

organisms. As we saw in section one, there is no sense in which Bergson views life as independent of material conditions, any more than he sees it as reducible to them. Bergson is unambiguous on this: the *élan vital* may be "a single current traversing all life" but it does not do so as the wind traverses a desert, 'animating' the particles of sand; *élan vital* passes "from germ to germ, through the medium of the developed organism" (CE 17; O 517). There is no sense in which it resembles the vitalism of the seventeenth and eighteenth centuries, which could in principle spring up anywhere, causing the spontaneous generation of organisms. As we will see very soon, for Bergson, life itself did not spring from inert matter, but is dissociated from it as a contrary thermodynamic tendency.

In the context of the evolutionary theories with which Bergson was engaging, vitalism always meant dualism or parallelism, two positions of which Bergson was consistently critical. In Ernst Haeckel's *Riddle of the Universe* for example, matter and spirit were regarded as parallel manifestations of a single universal substance, leading to a rejection of freedom and the view that in life, as in the matter it parallels, every act is determined by the constitution of the organism and its environment (see Haeckel 1900: 132-3 & 296). Hans Dreisch, on the other hand, through experiments that demonstrated the persistence of embryological development despite material interference, proposed a spirit-like force or 'entelechy' that accepted a freedom of life but in starkly dualistic terms (see Dreisch 1908). The fact that the organs do not exist at the beginning of gestation had led Wolff to introduce an "essential force" (*vis essentialis*) as the agent responsible for embryonic development, and Kant himself had toyed with the idea of a "developing-drive" (*bildungstreib*) that was inherited through the germ cells (see Magner, 2002: 170-1). In *Creative Evolution* Bergson appears to consider such theories unworthy of critical engagement, describing vitalism as "a sort of label affixed to our ignorance, so as to remind us of this occasionally, while mechanism invites us to ignore that ignorance" and suggesting even this is "more interesting" than "the hypotheses which this vitalism superposes on mechanism" (CE 27; O 530). The vitalist hypothesis may refer to 'life' but its unity is just as abstract and just as relative to the intellect as the atomism of the mechanistic hypothesis: observing the complex material activity of life "the first impulse of the mind is to consider this army of little workers as watched over by

a skilled foreman, the 'vital principle' […] but that is only a comparison; we find on reflection that there can be no foreman for the very simple reason that there are no workers" (CE 145; O 686).

Bergson introduces his concept of *élan vital* at the end of chapter one of *Creative Evolution*, in which he had demonstrated the failure of both mechanistic and finalistic approaches to account for a standard problem faced by evolutionary theories; that of convergence (the existence of similarly structured organs on different lines of evolution). He chooses the example of the human eye and the eye of a mollusc (the pecten – a species of scallop) because the two are composed of a number of analogous elements, although at least one Pecten expert has insisted that Bergson was completely wrong in this analogy.[16] Whatever the shortcomings of Bergson's knowledge regarding this particular example, one does not have to go so far as a complex organ such as the eye to appreciate the extreme improbability of any convergence at all taking place according to the model of evolutionary development put forward by both mechanism and finalism. Without repeating the details of Bergson's critique (which takes in the neo-Darwinian model of insensible variation and natural selection, Herbert de Vries' 'mutation theory', Eimer's 'orthogenesis' and the neo-Lamarckian theory of the heredity of acquired characteristics), he attributes the failure of the first two to the mechanistic focus on the complexity of parts, and of the last two to the finalistic focus on an abstract whole (in the form of an ideal end which the parts realise). The failure of all these theories to explain convergence rests on the same fact; they focus on the complexity of the form rather than the simplicity of the function: "this contrast between the complexity of the organ and the unity of the function is what gives us pause" (CE 57; O 570). What for the scientist is an infinitely complex organ, for life is the simple act of vision. If this simple act appears in analogous forms on independent lines of evolution, the most economical explanation lies in a shared cause.

This leads us to the essential question of *élan vital*: in what sense, if any, is it a cause of evolution? We will look at the original 'cause' of evolution itself shortly. The question here regards evolution in its details, particularly in its most inexplicable ones such as convergence. If the *élan vital* is not a transcendent life-force, but an immanent principle of organisation, we should expect phenomena like convergence to arise. But what does the concept actually name?

Bergson describes it as "a great current of energy passing from one generation of germs to the following generation of germs through the developed organisms which bridge the interval between the generations" (CE 57; O 570) but this does not tell us what it is as much as where it is to be found. On the one hand, the location of *élan vital* in genes would explain, in modern terms, how it can account for convergence even in Bergson's example where the eye did not begin to develop in either the human or the pecten until they had already diverged along different evolutionary paths, for what is evident in the phenotype does not tell us much about the potentialities of the genotype (the majority of genetic material – commonly referred to as 'junk DNA' – doesn't seem to 'do' anything). Is *élan vital* a continuity of potentiality, then? Is this how it accounts for convergence? Let us bear in mind what Bergson is claiming for the concept: all *élan vital* establishes is that "in certain points, [the eyes] may evolve identically" (CE 57; O 570). Bergson does not say that they always *do* evolve identically, let alone that they *must*, merely that they *may*. Given the fact that they *have* this is not claiming very much! That is to say, given convergence as a fact (and as Bergson says, it is an imperfect fact), we must reject mechanism, finalism and vitalism as a universal hypothesis because on any of these views, this fact should be impossible (or at least too improbable to support the hypothesis). Bergson does not claim that the *élan vital causes* convergence, or that it explains *why* it happens, just that it does not rule it out as mechanism and finalism do (and since convergence does happen, we should not reject a theory because it refrains from declaring it impossible)!

We could say, then, that while the vitalist hypothesis of an abstract unity of life is a reaction against universal mechanism, the *élan vital* is an integration of actual mechanisms into the real unity of evolution. This would suggest that since matter is no longer held to be a closed system of extrinsic relations between discrete parts, it is both unnecessary to appeal to life as something above and beyond matter and necessary instead to develop a method such as Bergson's that foregrounds the re-integration of apparently discrete facts into the real dynamics of their evolutionary organisation. Indeed, Bergson seemed well aware of the fact that by becoming less hypothetical, science would become more open to an idea like *élan vital*: "in speaking of a 'vital impetus' and a creative evolution, we were keeping as close as we could to actual experience; this is what many are

beginning to realise, since positive science, merely by abandoning certain theoretical ideas or giving them up as mere hypotheses, is drawing nearer to our views" (TSMR 91; O 1069).

Biologist Steven Rose has counted Bergson among "an alternative, almost underground non-reductionist tradition in biology [whose] voices were and still are drowned out by an almost universal reductionist consensus which insists that, whatever the theoretical critique, reductionism works" (Rose 2003: 78-9). We should note here that Bergson is no longer described as a vitalist but as a "non-reductionist", signifying an important shift in the intellectual landscape: we no longer have Bergson's so-called vitalism as a metaphysical hypothesis opposed to the 'scientific' mechanism, but Bergson's non-reductionism as a valid position within science that is opposed to what is now recognized as the metaphysical hypothesis of reductionism.[17] In other words, the same accusations that Bergson made against 'scientism' which went beyond the role of observing mechanisms in proposing the hypothesis of universal mechanism, is now being voiced within science itself in the critique of 'reductionism' that has been developed by Rose and others. However, this does not mean that vitalism was right after all, nor that every theory revealed in retrospect to be 'non-reductionist' has a contribution to make today. If Bergson remains a resource for Rose's project due to his critique of mechanism, now that such a critique is well established even within science, Bergson may prove even more valuable for his distinction between real and abstract unity.

Thermodynamics

Let us turn to the first of the two aspects of *élan vital* that I said are essential to Bergson's social thought: the impulse that marks out the creativity of life against the inertia of matter. This leads us into a new distinction that Bergson develops at the end of his discussion of biology in chapter three of *Creative Evolution*, between the thermodynamics of matter and that of living systems (I will return in the next section to the second aspect of *élan vital* that is important for society, the preservation of unity among diversity which leads to the question of external teleology). I will consider Bergson's account of thermodynamics in some detail,

as it is essential to a number of issues I will focus on in the rest of the thesis; first, the dissociation of society and individuality along the insect and human lines of evolution in the next section; second, the tension between society and individuality in human culture that I will examine in chapter two; and third, the question of the significance of humanity within nature that I will examine in chapter three. Let us examine his account then, with a view to ascertaining first, whether it is acceptable in light of contemporary knowledge about the thermodynamics of living systems, and second what its relevance is to our understanding of the real efficacy of society as a level of biological organisation.

Bergson is well aware that intellectual presuppositions about life and matter, and the relation between them, have distorted the question of the origin of life by taking it apart from the far less frequently asked question of the origin of matter: "why must we speak of an inert matter into which life and consciousness would be inserted as in a frame, by what right do we put the inert first" (CM 92; O 1332). To take matter as given and seek on this basis an origin of life betrays the same materialist bias of the intellect that we saw underlying the conception of life as something that is 'added' to matter in the last section. Taking neither life nor matter as a given, it is their duality that Bergson seeks to account for, and he does so with reference to their dissociation within a single reality, a universal duration, that includes both. In this way he avoids the assumptions of both the materialist (who privileges one term) and of the vitalist (who preserves both as independent realities).

With reference to thermodynamics, Bergson provides a *cosmogony*, or evolution of the universe itself, which demonstrates the necessity of the *impetus*, the *unity* and the *diversity* of life, by tracing its dissociation from matter within a universal duration that includes both. For Bergson, the first law of thermodynamics is merely conventional, because in stating that the total amount of kinetic and potential energy in a closed system must remain constant it is only dealing with relations between parts rather than the nature of the whole. The second law, which he describes as "the most metaphysical of the laws of physics, since it points out without interposed symbols, without artificial devices of measurement, the direction in which the world is going" (CE 156; O 701) is the one that interests him, because it describes the tendency of all energy to be distributed across all matter in a uniform manner. The implications of this fact

do not escape Bergson. – First, matter cannot be identified with abstract space. If matter is a tendency *towards* homogeneity or 'entropy' then it cannot in itself be homogenous: "in conferring on matter the properties of pure space, we are transporting ourselves to the terminal point of the movement of which matter simply indicates the direction" (CE 131; O 667). – Second, we can no longer define the universe as "infinite" because "to speak of an infinite universe is to admit a perfect coincidence of matter with abstract space" (CE 157; O 702).[18] Hence, Bergson proposes a more exact description of matter would be "*a creative action which unmakes itself*" (CE 159; O 705, Bergson's italics). – Finally, the definition of matter according to its future end in homogenous space immediately raises the question "whence does it come" (CE 156; O 702) and suggests the direction in which we will find the answer: "the origin of these energies must be sought in an extra-spatial process" (CE 157; O 703).[19] This account of matter as a tendency within a broader reality allows him to conceive of the origin of life in terms of a dissociation between it and matter.

Before looking at Bergson's account of how this dissociation takes place, let us see how Bergson characterises this 'reality' that he variously calls "the Whole" (CE 6; O 502), "the Absolute" (CE 191; O 747) and "the universe" (CE 7; O 503). And, although religion does not play an explicit part in Bergson's philosophy in *Creative Evolution*, there is one occasion where he rather abruptly and in passing calls it "God" (CE 160; O 706); I will deal with this religious aspect of his thought in chapter three. However, the value of such names – indeed of any names – is strictly limited in Bergson's case since they are inadequate to convey the volatile nature of the reality he describes:

> It makes little difference to me if one says 'everything is mechanism' or 'everything is will': in either case everything is identical. In both cases 'mechanism' and 'will' become synonyms of 'being' and consequently synonyms of each other. Therein lies the initial vice of philosophical systems. They think they are telling us something about the absolute by giving it a name. (CM 49; O 1291).

Given these capitalised names, and in light of Bergson's images of 'reality' in terms of "a centre from which worlds shoot out like rockets in a fireworks display" (CE 159; O 706), one cannot help but think of the *emanation* of

Plotinus. However, for all his capitalised nouns Bergson never refers to reality as "the One"; perhaps to avoid the association with Plotinus, but more probably to avoid the mathematical implication of something that is eternal or self-identical ("the One" as "the 1=1"). More appropriate to Bergson's reality would be "the *n*+1" because it perpetually differs from itself and grows by increasing: "reality is global and undivided growth, progressive invention, duration: it resembles a gradually expanding rubber balloon assuming at each moment unexpected forms" (CM 95-6; O 1335-6).[20] If universal duration is like conscious duration – which Bergson describes as "a reciprocal implication of elements *of which we cannot say that they are one or many*" (ME 21; O 831, Bergson's italics) – then it is clear that the name "the One" would grasp only one side of this reality: "if I declare it *one*, inner voices arise and protest […] but if I make it *distinctly* manifold, my consciousness rebels quite as strongly" (CE 165; O713, my italics). Let us say, then, that reality, like consciousness, is *both* unity *and* diversity as given in experience, and *neither* unity *nor* diversity in the mathematical sense.[21]

Thus we are brought back to the image of a virtual multiplicity, this time characteristic of the universe itself. This volatile reality provides the basis for a *cosmogony*, or evolution of the universe, but one that is suggested by physics as well as metaphysics, and, despite the analogy with consciousness – "for want of a better word we have called it consciousness" (CE 152; O 696) – it bears none of the marks of animism or anthropomorphism that had characterised ideas such as the 'world soul' of the ancients; a notion that Bergson dismisses due to the "mythical elements" (CM 92; O 1332). Bergson describes the emergent duality of life and matter by characterising universal duration as a 'tension' that relaxes, or as Bergson says *detends*, and in doing so *extends*; an inversion that constitutes an interruption of duration by itself. *Except*, once this inversion has taken place, it is no longer duration that interrupts itself; the inversion is the moment of dissociation – what continues forward of the original movement is now life; what falls back into itself of the original movement is now the matter that life must accommodate as it continues forward: "all our analyses show us, in life, an effort to re-mount the incline that matter descends" (CE 157; O 703). It is important to note (and strange as it is to say about Bergson), that this is not a temporal process, despite the narrative or chronological element involved. The very

characterisation of duration as a *tension* in the first place suggests two tendencies, and the very notion of duration as a virtual multiplicity rules out the possibility of thinking of it as a simple or numerical One. Unavoidably abstract as it is to discuss such matters, the universe, for Bergson is originally *tense*:

> In the universe itself two opposite movements are to be distinguished, […] 'descent' and 'ascent', […] but the ascending movement, which corresponds to an inner work of ripening or creating, *endures* essentially, and imposes its rhythm on the first, *which is inseparable from it*. (CE 7; O 503, my italics)

This conception provides both a reconciliation between matter and life, and a basis on which to describe cosmogony and evolution in terms of a dissociation of tendencies rather than an association of elements. As we have seen, the universe is extra-spatial, not non-spatial. The difference between duration and space, like that between organisation and mechanism, is not symmetrical: Bergson rejects the pure space of an infinite universe because it excludes duration: the advantage of duration is that it includes space; not the abstract space that excluded duration itself, but the real space or *extension*, which is one side of its original *tension*. This is the meaning of Bergson's formulation 'reversal of the effect = interruption of the cause' (CE 152; O 696): extension, an effect of the originary tension, by the very fact of detending, extends and interrupts the tension it came from, as it assumes the contrary direction. In this, Bergson was echoing research that was going on at the same time in physics, to trace the 'reality' of space back beyond its intellectual representation: "in Einstein's theory, 'space' is brought to its greatest tension; this tension will be manifested to such a degree that even the method of Archimedes and of Galileo, heretofore fundamental to rational science, is no longer capable of resisting" (Busch 1969: 213). This tension that interrupts itself puts us in mind of the feedback mechanisms involved in the regulation of gene expression that we looked at in the last section. Such mechanisms can be of different kinds, maintaining an equilibrium, setting up an oscillation or rhythm, inhibiting or increasing the effects of the genetic material. We cannot take this analogy too far, but it seems that the effect of this inversion within universal duration by which an aspect of itself falls back and interrupts the rest can be characterised in the following ways: it inhibits the whole movement,

it becomes a medium which the movement must work through (there is no getting around it), and through this medium the whole can proceed only by fragmenting. What it loses of its unity it gains in intensity at the points where it does continue forward. For Bergson, the significance of humanity is that it is the *only* point at which duration has succeeded in pushing through its own self-inhibition. This is a very ambiguous aspect of Bergson's thought, and I will discuss how best to interpret it in chapter three. Let us note for now that Bergson's characterisation of reality itself, as well as the evolution of life, in terms of what is essentially a feedback mechanism that intensifies duration by dissociating it, reveals the sense of his otherwise merely rhetorical description of humanity as the "term", "end" and "ground" of evolution.

Thus, we end up with an incredible reversal (or near reversal). In addressing the traditional question of the origin of life (out of matter), Bergson ends up revealing an origin of matter (not quite out of life, but out of a universal duration that is analogous to life): "if a simple arrest of the action that generates form could constitute matter, […] a creation of matter would be neither incomprehensible nor inadmissible" (CE 154; O 698). Again, the advantages of this reversal lie in its asymmetry: given matter, the origin of life could only be described in metaphysical terms (if it wasn't dismissed as merely epistemological or methodological problem by reductionism); given life however (or a principle analogous to it), the origin of matter can be described in physical terms; it is already contained in the very terms of thermodynamics; if matter is a 'cooling' or 'degradation' then it is by definition an 'inversion' of an originally creative activity: "the geometrical order has no need of explanation being purely and simply the suppression of the inverse order" (CE 152; O 696). If the intellect misses this fact, it is because the individuation within the environment that created it has resulted in a real discontinuity that makes it necessary, indeed inevitable, that the current of universal duration I call 'myself' will experience the rest of universal duration as external: "though [consciousness] does indeed move in the same direction as its principle, it is continually drawn the opposite way, obliged, though it goes forward, to look behind" (CE 152; O 696). The implications of this for our understanding of matter are of enormous significance. In attributing an evolution to matter itself Bergson renders it, both as a whole and in-itself, *disanalogous* to the objects the intellect cuts out within it. There is an

outer limit to objectivity beyond which matter is organised in a way analogous to life: "it is not artificially, for reasons of mere convenience, that we isolate our solar system: nature itself invites us to isolate it" (CE 155; O700), just as there is an inner one: "analysis resolves [matter] into elementary vibrations, the shortest of which are of very slight duration, almost vanishing, but not nothing" (CE 129; O 665). Neither the evolution nor the deepest interior of matter can be conceived in terms of geometrical space, because that space is itself nothing more than the measure of real discontinuity that evolution has produced between the organism and its immediate environment: "*it is the same inversion of the same movement which creates at once the intellectuality of mind and the materiality of things*" (CE 133; O 670, Bergson's italics). What Bergson's engagement with thermodynamics reveals is the upper and lower limit to that environment beyond which matter as well as life can be grasped in its tendency, which is to say, in universal duration.

Hence, Bergson proposes a more exact definition of matter: "*a creative action which unmakes itself*" (CE 159; O 705, Bergson's italics) and of life: "*a reality which is making itself in a reality which is unmaking itself*" (CE 159; O 705, Bergson's italics) that take their tendency into account.[22] Such a definition of either matter or life was unheard of in 1907. The earliest example of a similar project in biology that I am aware of was in abiogenesis, an area of molecular evolution. Founding texts such as Alexander Oparin's *The Chemical Origin of Life*, first published in 1927, emphasised the necessity of relating any theory of life further back than the material conditions of the emergence of life on earth, to a state of matter prior to the formation of the solar system: "the evolution of carbon compounds was basically the process which took place in the universe long before the appearance of our solar system and which then developed during the formation of earth as a planet" (see Oparin 1971). Despite the cosmological reach of such enquiries, seeking an origin of life in an earlier state of matter, they still stopped short of a genesis of matter itself, and still faced the key problem that biology has always faced: its inability to account for the fact that life exists in the first place. Bergson's cosmogony comes close to satisfying, in its broad outlines at least, his claim that a correctly stated problem (the origin of life) is its own solution: given the 'ascent' of life and 'descent' of matter in thermodynamic terms, both are reconciled in an original creativity out of which, on Bergson's

definition, it is highly improbable for life *not* to exist (and it is on this basis that Bergson emphasises the probability of life existing in other solar systems): "life is possible wherever energy descends the incline indicated by Carnot's law and where a cause of inverse direction can retard the descent, that is to say, probably, in all the worlds suspended from all the stars" (CE 164; O 712).[23]

There are two sources of life, based in the double nature of reality itself: on the one hand creation; on the other hand an inversion by which it interrupts, fragments, and thereby intensifies itself: "we represent statically ready-made material particles juxtaposed to one another, and, also statically, an external cause which plasters upon them a skillfully contrived organization. In reality, life is a movement, materiality is the inverse movement; […] there results between them a *modus vivendi*, which is organization" (CE 160; O 707). As we saw in the last section, this organisation is an individuation of the living being within its environment. In terms of thermodynamics, we can now add that this individuation takes place as the life that persists in 'making itself' through matter utilises the energy of that matter to fuel its creative path. Biologist Mae-Wan Ho, one of the few to adopt Bergson's work as a valid resource within science, has developed an account of living systems in exactly these terms in her book *The Rainbow and the Worm: The Physics of Organisms*. Like Bergson, she claims that living organisms are "irreconcilable with the statistical nature of the laws of thermodynamics" and develops what she calls "a thermodynamics of organized complexity" that is adequate to describe living systems (Ho 1993: *xi*). Ho confirms Bergson's intuition that while in matter energy tends towards undifferentiated distribution or "equilibrium" as stated by the second law of thermodynamics, living systems are highly differentiated as a consequence of the way "energy flow organizes and structures the system in such a way as to reinforce the energy flow" (Ho 1993: *xi*). In order for this to work, an organism's ability to store energy is essential. Ho defines an organism as a coherent structure maintained far from thermodynamic equilibrium by the ability to store energy, and then release it in a way that magnifies its effect well beyond any potential it would have had in a purely material context. For Bergson, as for Ho, two things only are necessary to life: "a gradual accumulation of energy" and "an elastic canalisation of this energy in variable and indeterminate directions" (CE 163; O 711).

Bergson's engagement with thermodynamics accounts for both the real unity of life in an original impulsion, and the necessity of its fragmentation as its self-organisation is interrupted by the matter it must then adopt: "the evolution of life in the double direction of individuality and association has therefore nothing accidental about it: it is due to the very nature of life" (CE 167; O 716). We will follow these directions to the point where the social insects and human individuals appear in the next section, then in the next chapter we will see how the impulse of life to continue through the forms it organises also accounts for the tension between society and the individual that is manifested as moral obligation. In itself, the co-existence of two levels of biological organisation does not entail the eruption of any strife between them; there could be concord as there is between the organism and the individual systems it includes. It is the continuation of the creative impulse through its own inversion that will explain the tendency of the individual to depart from the social organization. Finally, this thorough examination of Bergson's cosmogony will prove essential to our examination in chapter three of the significance Bergson attributes to humanity as the point at which the original creation has pushed furthest. This assessment of humanity will be one of the key aspects of Bergson's social thought; it will set the tone for just how we interpret Bergson's views on the individual's participation in both society and nature; yet it is among the most ambiguous areas of his thought.

The Dissociation of Society and Individuality

Bergson devotes chapter two of *Creative Evolution* to tracing the development of society and individuality to their most highly realised forms in hymenoptera and humans, describing the internal dynamics, the form of consciousness and the relation to the environment that is characteristic of each. This provides us with a third aspect of Bergson's social thought as it pertains to biology: that society does not arise from an association of individual organisms, but is a level of biological organisation that dissociates itself from individuality over the course of its development. Bergson's account of the place of society in nature is tangential to his main project in *Creative Evolution*, which is to discern the place

of humanity in the animal world, and that of the animal world in nature (CE 69; O 585). However, because his account of evolutionary development emphasises growth by dissociation rather than addition, he undertakes this task comparatively, first distinguishing the plant and the animal according to their tendency to store and release energy, and second distinguishing the insect and the human according to their tendency to utilise energy conservatively or creatively. We have seen that Bergson's understanding of life as organisation allows him to conceive equally of an individual, a society or an ecosystem as a coherent 'organism', and how the explosive unity he places at the very beginning of life allows him to characterise life as both unity and a search for individuality. We will now see how that search leads to the individuation of self-organising living systems, some of which are properly individual, some of which are social, and some of which are ecological. The key points arising from this section will be:

- the individual and the social are created out of a single process of biological organisation that separates as it grows, meaning society has an immediately biological evolution, and not only a second-order cultural evolution
- as they evolve, society and individuality display increasingly different characteristics – both internally in the form of consciousness they emphasise and externally in their relation to matter – but they remain functionally homologous
- this unity of life is just as robust as the unity of the organised body, to the extent that what intellect takes to be the action of an individual is in many cases more properly attributed to a broader level of social or ecological efficacy

The notion of divergence has always been fundamental to evolutionism. The production of different species from a single parent stem was implied, if only ideally, in the taxonomy of Linneaus, and it was one of the key facts that Darwin sought to prove in *The Origin of Species* in arguing for evolution or 'descent with modification' against the competing idea of the separate creation of species. However, divergence in itself does not imply dissociation as the mechanism that

causes it; two lines of evolution could diverge because of the accumulation of additional characteristics, as developed in terms of Lamarckian finalism or Darwinian mechanism. As we saw in section one, such theories cannot account for evolutionary convergence between species, whereas the explanation of divergence in terms of dissociation at least renders this fact possible, and even likely. In this section we will see what the advantages of this model are for some very different problems in biology: not the similarity of structure implied in convergence, but the complementarity of behaviour implied in instinct.

Dissociation and Adaptation

Before looking at Bergson's account of the directions life takes, let us consider three consequences of the model of divergence by dissociation.

First, it explicitly opposes the linear view of evolution that has dominated philosophies of nature since Aristotle.[24] Linearity could be preserved very easily within an adaptationist interpretation of divergence, since humanity, for example, could be held to have passed through the states represented by other species and achieved its current form simply by progressing further. Bergson's model of dissociation firmly establishes that the line of evolution that ends in humanity has not passed through the other forms he considers (plant, insect, animal) but has travelled alongside, and departed from, them due to the increasing differentiation of an original impetus. The undeveloped consciousness or "torpor" (Bergson refuses to call it unconsciousness, as we will see) of the vegetable, the instinct of the animal and the intellect or reason of human beings are not "successive degrees of the development of one and the same tendency" but are "three divergent directions of an activity that has split up as it grew" (CE 87-8; O 609). This fact has enormous implications for our understanding of both society and individuality, the most fundamental of which is that neither is in any sense a condition of the development of the other, the volatility of the tendency they sprang from being the condition of the divergent development of both: they "coincided in the vital impulsion [and] have been dissociated by the very fact of their growth" (CE 87; O 609). A single original dynamic of biological organisation came to settle on the individual on the one hand, and the group on

the other, as it divided in order to explore these possibilities.

Second, whereas the model of divergence by addition results in an irreconcilable epistemological separation between species – what is added to one line of evolution cannot by definition tell us anything much about the development of another line – Bergson's model of divergence by dissociation opens the way to a holistic analysis in which it is necessary, in order to understand the evolution of one tendency, to see how the same original state that contained it developed differently by emphasising another (we recall how the study of the tendency of matter towards entropy contributed to the definition of life in terms of non-equilibrium thermodynamics). In order to understand the divergent directions evolution has taken, we must begin in each case by finding a form that "shares in both without being either" (CE 233; O 804). This is what Bergson will do first in the case of plants and animals, and second in the case of instinct and intellect along the animal line. The method of creative evolution is, then, necessarily comparative: "there is no real manifestation of life […] that does not show us, in a rudimentary or latent state, the characters of other manifestations" (CE 77; O 595-6). This leads both to a critique of adaptationism, and a recognition of the enormous place left to contingency by dissociation. The characters of a species "must be compared and weighed in each particular case, in order to ascertain to what extent they are essential or accidental, and how far they must be taken into account" (CE 86; O 608)

A central theme of the mechanistic analogy between organisms and machines was the idea that the organism is adapted to perform certain tasks; that the task is in some sense the reason they developed the way they did, and that consequently every adaptation is essential. For Bergson, adaptation is a necessary condition of evolution, and may explain the superficial qualities of a species, but it is not a "directing" or "profound" cause of an evolution that in itself remains contingent (CE 66 & 86; O 581 & 607). When Bergson tells us that "before the evolution of life […] the portals of the future remain wide open" (CE 68; O 584) and that life "takes directions without aiming at ends" (CE 67; O 582), we may at first think this cannot possibly be the case! What of the environment, and of all the things an organism *has* to do? Adaptationism springs naturally to mind, as it is much easier to imagine evolution as an improvement in the ways we relate to the environment, rather than as a creation that takes no

account of it. However, Bergson challenges this natural way of thinking when he reminds us that "life need not have evolved at all" (CE 66; O 581). With reference to creatures who have not evolved at all since the Silurian epoch, Bergson points out that *every* organism is adapted to its environment: there is nothing either in an amoeba or in its environment to suggest the possibility, let alone the necessity, of its evolving into a plant or animal, and yet it did so: "vegetable and animal are descended from a common ancestor which united the tendencies of both in a rudimentary state" (CE 74; O 591). For Bergson, the profound cause of this evolution should be attributed to the original potential of the cell, and the "need of creation" that characterises its volatility (CE 167; O 716). In the context of this creative impulse, adaptations are the measure of the degree to which the differentiation of the living system within its environment can never be complete. Adaptation reveals the degree to which a tendency *cannot* develop everything of the prior whole it is diverging from (CE 77; O 596) because it is "at the mercy of the materiality which it has had to assume" (CE 83; O 603). It is because the organism is never a complete individuality, because it is only "relatively stable" (CE 83; O 603), that it displays in its form and behaviour the degree to which the real unity of life, of which it remains a part, is no longer automatically acted through it, but must be re-established by artificial means. Indeed, although Bergson does not say so explicitly, in one sense adaptation itself is the "danger that lay in wait" (CE 84; O 605) for living systems, as we will see when we look at ecological instinct.

This leads us to the third main consequence of Bergson's model of divergence by dissociation: the enormous place Bergson leaves to contingency in evolution. For Bergson, the impetus of life, and its resistance by matter, are alone essential. Apart from the general theme of 'growing by dividing' everything else in life is contingent (I will hold off from dealing with Bergson's description of humanity as an 'end' of evolution until chapter two). Indeed, a defining aspect of a specifically *creative* as opposed to *adaptive* evolution is the creation of forms without an end in view, and the part Bergson leaves to contingency in evolution extends as far as life assuming a carbonic form and being developed and concentrated in organisms. The utilization of energy is alone essential. This immediately challenges any characterization of evolution in terms of progress. If life "takes directions without aiming at ends" (CE 67; O

582) then every adaptation is contingent in its form; the only thing necessary is adaptation itself, which is the measure of the discontinuity that the *creative* evolution, or dissociation, has established between the organism and its environment: "adaptation explains the sinuosities of the movement of evolution, but not its general directions, still less the movement itself" (CE 66-7; O 582). The difference between models of evolutionary divergence based on addition and dissociation then, comes down to the fact that adaptation is active, and therefore inexplicable on the former view; passive and requiring no explanation on the latter. That is to say, for a creative evolutionism, adaptation is an effect, and not a cause (although we will see, when we look at ecological instinct, that once established adaptations may become a cause; but even then, it is only the 'sinuosities' and not the direction of an evolution that they explain).

Plant and Animal

The dissociation of life along divergent lines has as its source the internal dynamics of life itself, and the resistance life meets from inert matter (CE 63-5; O 578-9). Bergson, like Mae-Wan Ho, defines living systems in general in terms of a non-equilibrium thermodynamic state. This 'reality making itself' does so by setting up systems within an energy flow that can store and release energy in such a way as to introduce indetermination into the flow itself. According to the definition of life as a system in which energy sets up a system to use energy, the "problem" faced by life was to obtain from its environment "through a partial and provisional suspension" a reservoir of potential energy that can be utilised at the desired moment (CE 75; O 593). Bergson attributes the dissociation of the plant and animal kingdoms to the double nature of this originally non-equilibrium thermodynamic tendency of life itself: "life as a whole, whether we envisage it at the start or at the end of its evolution, is a double labor of slow accumulation and sudden discharge" (ME 14; O 825). Given this original volatility, any subsequent divergent speciation is attributed by Bergson to the dissociation of "two tendencies which at first were fused in one" (CE 76; O 594). The validity of this claim by contemporary standards would be hard to prove, but as a general mechanism of divergence it has the benefits of being consistent with

both physics and biology (insofar as they practiced by non-reductionist researchers like Ho), and of lacking the internal contradictions that Bergson revealed in both the mechanist and the finalist accounts of evolution.

Given the fact of dissociation, then, what Bergson is interested in is the progress of the explosive side of the original tendency towards the freer and freer expenditure of energy; the tendency that will eventually lead to human consciousness and freedom (ME 14-5; O 825). However, while defining the animal by this characteristic, and the plant by the perfection of a system of accumulation of energy, Bergson is not denying consciousness to the plant. As different developments of a single parent tendency, the kind of definition appropriate to living systems is a dynamic definition, taking tendencies rather than states into account: the kingdom, family or species "*must not be defined by the possession of certain characters, but by its tendency to emphasise them*" (CE 69; O 585, Bergson's italics). Their tendency to emphasize different aspects of energy flow leads to the development of different modes of feeding, of movement, and ultimately of consciousness in the plant and the animal; the two kingdoms are not distinguished by the possession of these characteristics, but by the tendency to emphasise them: "'unconscious' and 'conscious' are not two labels that can be mechanically fastened, the one on every vegetable cell, the other on all animals" (CE 73; O 590). Such is the distinction at a functional level. Materially, it results in the organisation of two equivalent mechanisms, the chlorophyllian function of the plant develops the means of the accumulation of energy, and the nervous system of the animal develops the means of its release. These are, for Bergson, the product of the same original impetus that has tried out, along these two lines of evolution "two different kinds of convenience" or "two different ways of being industrious" in procuring the carbon and nitrogen they need (CE 74; O 591).

Thus, Bergson comes to the remarkable conclusion that the nervous system, and more particularly the brain, is not a material condition, but an expression in material terms, of consciousness and freedom. We cannot, therefore, refuse plants consciousness just because they have no nervous system: "the nervous system arises, like the other systems, from a division of labour; it does not create the function, it only brings it to a higher degree of intensity" (CE 72; O 589). Let us not forget: "the animal cell and the vegetable cell are derived

from a common stock" (CE 73; O 590). If mobility and consciousness have been developed along the line of evolution leading to the animal, then they must remain, potential but not actual, on the line leading up to the plants. The consciousness of the animal is refined through dissociation, not gained through addition: "we should define the animal by sensibility and awakened consciousness, the vegetable by consciousness asleep and by insensibility" (CE 73; O 590). Thus, to find the best specimens of consciousness in the plant we must trace back the evolution of its tendency towards torpor, to find the best specimens in the animal, we must trace its tendency to awaken forwards, to the point at which it emerges in human creativity.[25] However, the flip-side of this is that the study of the plant reveals the danger that in principle always awaits the animal: that of consciousness falling into 'torpor', or expending itself entirely in the task of existing, rather than continuing the creative exploration of possibilities that characterises evolution (we will deal with this lapsing of consciousness at a natural level imminently; in chapter three we will see how it occurs at a cultural level in human social behaviour). Bergson acknowledges the existence of many "blind alleys" alongside the "two or three highways" of evolution, attributing these arrests and setbacks either to life settling in a convenient evolutionary niche, or to its industry being taken up in the work of defence against predators; hence as the animal world as a whole gains mobility, its members become more dangerous to each other, and distract each other from any creative evolution by becoming drawn into adaptive relations between predator and prey (CE 84-8; O 605-9, I will examine the analogy Bergson draws between predation and war in the conclusion). While such adaptations are only seen as a stopping point for a creative evolution, it was the aspect of evolution that would for a long time capture the imagination of biologists from Erasmus Darwin ("'tis one great slaughterhouse, this warring world") to Herbert Spencer ("the survival of the fittest").

Instinct and Intellect

This first divergence places both society and individuality on the side of activity rather than passivity. In this respect, it is they, rather than the plants, who

potentially fulfil the "role of life" to insert the greatest possible indetermination into matter (we will see that in actuality most fail to do this). Bergson distinguishes two different kinds of action on inert matter and two different modes of consciousness that differentiate and come to characterise arthropods and vertebrates (CE 89; O 611). Again, it is not the possession, but the tendency to emphasise these two developments of a single animal tendency: "intelligence and instinct, having originally been interpenetrating, retain something of their common origin […] there has never been a complete severance between them: they haunt each other continually" (CE 88; O 610). This fact will be of the greatest importance to Bergson in *The Two Sources of Morality and Religion* when he describes the persistence of a social organisation of humans themselves based in a 'virtual instinct' that remains present in the vertebrates despite the fact that they embody the development of the tendency of consciousness towards intellect. The divergence between them is a difference of degree that develops to such an extent that it becomes a difference in kind. The two manners of acting on matter tend in the direction of the perfect performance of a fixed task in the arthropod, and the more adaptable performance of a range of tasks in the vertebrate. It is in the development of these two tendencies that the difference of degree in how 'well adapted' they are finally amounts to a difference in kind. First, there is automatism in the social insect, and freedom in the human: "we may say, as we will, either that instinct organises the instruments it is about to use, or that the process of organisation is continued in the instinct that has to use the organ" (CE 91; O 613). Second, there is freedom in the human, whose nervous system is "a veritable *reservoir of indetermination*" (CE 82; O 602, Bergson's italics).

The connection between consciousness and constructive activity is at the heart of this divergence. It is not the individual insect, but the insect society or '*social* organisation itself' that acts on matter: the body of the individual is the tool by which it does so. With reference to the polymorphism of the social insects, Bergson claims that this body or tool is perfectly adapted to a single fixed task: "where social life divides the labour among different individuals and thus allots them different instincts, a corresponding difference of structure is observed: the polymorphism of ants, bees, wasps" (CE 91; O 614). The human tool, on the other hand, is imperfectly adapted to any one task, but is mobile.

While the appendages of the insect each have a special function, the human hand is "capable of any kind of work" (CE 86; O 608). Indeed, Bergson dates the appearance of humanity to the appearance of the first tools as the sign of a "particularly *human* intelligence" (CE 89; O 611), because "mechanical invention has been from the first its essential feature" (CE 90; O 612). In Bergson's view, the indetermination of the tools made by humans opens the way to a creative activity, just as the insect performs an automatic activity: where the application of the tool is indeterminate, or not given in the form of the tool itself, this indetermination "reacts on the nature of the being that constructs it" (CE 91; O 614). Since consciousness is the measure of the zone of possible actions that surrounds the present situation of the living being, this allows Bergson to claim that consciousness is stopped up in the insect who acts automatically in a fixed way (CE 93; O 616-7). As with the plant, we would have to *descend* along the insect line of evolution to find examples of a freer consciousness, for in the terms of the tendency towards fixed and perfect action that the insect develops, consciousness would mark "a deficit of instinct" (CE 94; O 618). In the human, on the other hand, Bergson says that deficit is the normal state of intelligence because every new action creates new needs (CE 94; O 618).

So how are we to understand Bergson when he says that the ideal of instinct is the use of organised instruments, and that of intellect is the construction of unorganised instruments (CE 91; O 614)? The paths he is describing are clear enough, but just who or what is acting on each path? If the individual insect is a tool, an aspect of a wider social organisation, and this society is the living system that acts, can we attribute instinct to the individual ant in the same way that we attribute intellect to the individual human? It seems that this analogy of solid body to solid body – natural as it is to the representation of life provided by the intellect's 'logic of solids' – would misrepresent the real dynamics of organisation where instinct is concerned. Would it not be better to draw an analogy between the society of ants that has instinct and the individual human who has intellect? It simply does not make any sense to describe instinct as analogous to intellect if this means we think of it as being *thought* by an *individual* with a *brain*. Indeed, the two forms of consciousness are clearly disanalogous insofar as instinct is applied (as Bergson says) categorically to material things, and intellect is applied hypothetically to formal relations (CE 96-

7; O 621). Indeed, Bergson seems to suggest as much when he says that in instinct, consciousness is only *implied* by the action performed, and not actually *thought* in the performance of it (CE 97; O 622). Thus, when Bergson says that in the insect "the instrument forms a part of the body that uses it; and, corresponding to this instrument, there is an instinct that knows how to use it" (CE 90; O 613), he should not be taken as attributing agency to the individual ant or bee who 'has instinct'. Indeed, if this were the case, instinct would amount to nothing more than automatism. It is more profitable, in our view, to locate instinct squarely in the social organisation of the ant, for this is the level at which the 'organism' or living system *acts*, or 'knows how to use' the bodies of the individuals to build a hive or hill. Let us look more closely at how instinct operates.

Social Instinct and Ecological Instinct

Bergson considers two kinds of instinct relations – the division of labour and 'co-ordination' between members of a single species, and the kind of 'knowledge' a member of one species has of another – with reference to a number of examples he takes from Henri Jean Fabre's encyclopaedic *Souvenirs Entomologiques* of the 1890s. In both cases, the action of the 'individual' creatures is inexplicable without reference to some broader organisation that articulates the whole. The image of the hand passing through iron filings that Bergson used to demonstrate the organising action of life through matter applies just as well to the organising action of society through 'individual' ants, bees and wasps:

> Most instincts are only the continuance, or rather the consummation, of the work of organization itself. Where does the activity of instinct begin and where does that of nature end? We cannot tell. (CE 90; O 613)

Instinctive behaviour such as the construction of a hive is most commonly investigated today through mathematical modeling. It is not to the action of individuals, but to critical points in the activity of the group that activities such as the construction of the hive are referred. In a study of termite mounds, P. P.

Grassé described how an initially uncoordinated activity in which termites drop soil pellets at random spontaneously turns into a rigorously co-ordinated activity when the number of pellets reaches a critical density. Now, it is clear, that not only do the termites not 'know' (in the sense in which we understand knowledge) what each other are doing, they do not even know what they are each doing themselves, since no one of them has any experience of the whole mound or 'end' towards which they are working. The emergence of such ordered activities are generally explained with reference to chemical signals either in the environment or produced by the insects themselves (see Stuart 1967 & 1972 and Turner 2000 & 2005).

Rather than describing instinct as a possession of the individual then, better to say it is the living system that includes the individuals, be it social or ecological, that is 'instinctive', for it is that level of organization that is active. To attribute the actions we have considered to the 'individuals' who perform them would be akin to attributing this thesis to my fingers rather than myself, and marveling at how they can each know what the others are doing, how they can collectively know how to write about Bergson! It is true enough (not in the case of my fingers, but in the case of instinct at least) to slip past the intellect, *materially* it is the termites who build the hive, but functionally it is not, or at least the plural is out of place, it is the termite-society that builds it, for on Bergson's view the society must be viewed as an organism, and hence as an individual living system like myself.

What of the examples of instinct between species that Bergson refers to? The organisation that would account for these is not that of a single society or species, and cannot be related to a polymorphism derived from a division of labour (to suggest that there is polymorphism between species would be stretching the analogy between an ecosystem and an organism to the point where it becomes a tautology). It is clear from such facts, although Bergson does not explicitly distinguish them, that there is an ecological instinct as well as a social instinct. That is to say, instinct is a positive mode of consciousness insofar as it pertains to a single species, organised at the group rather than the individual level, but it is a negative mode of consciousness – a lapsed intellect – insofar as it pertains to an ecological process involving two or more species. They are not so much 'organised by' an ecosystem, as organise themselves in such a way as to

preserve the circulation of energy in that system. In order to explain this lapse of consciousness or intellect, we must return to the question of adaptive evolution, and its relation to the more profound creative evolution that underlies it.

One of the examples Bergson uses is of a wasp which stings a cricket on the three nerve centres that serve its three pairs of legs, and another which stings a caterpillar on each of its nine nerve centres and then squeezes the victims head between its mandibles just hard enough to paralyse it without killing it (CE 111-2; O 642-3). For Bergson, if we ask 'how does the wasp know where the cricket's or the caterpillar's nerve centres are' we fall prey to an anthropomorphism that prevents us from ever finding the answer. So what is wrong with the question? It is phrased as if wasp and cricket, or wasp and caterpillar occupy not only different but completely independent lines of evolution. For Bergson this is not the case. Evolution may emphasise multiplicity, but it is always also unity, and it is with reference to their unity, and not to their multiplicity, that the wasps' expertise is to be explained (we should note that it is merely the fact that such seemingly mysterious knowledge is possible at all that Bergson establishes – the details of each particular instinct relation remains to be accounted for by biology – and we will see shortly how he does so in terms of what he calls 'sympathy' and external teleology). Evolution is dissociation into tendencies, but it is also a persistent unity between those tendencies that still articulates their activity in certain respects, despite their self-organisation in others: "sympathy expresses in concrete form the *relation* of the one to the other" (CE 112; O 642).

Teleology and Real Discontinuity

Thus, it is in his account of instinct above all, that the meaning of Bergson's teleology comes to light. But what kind of teleology is he working with? In *Creative Evolution*, Bergson tells us that while neither mechanism nor finalism fit as accounts of evolution, finalism "might be recut and resewn, and in this new form fit less badly" (CE *xxxviii*; O 494). From Aristotle to evolutionary biology, and apart from their brief abolition during the mechanical age, teleological explanations have been the most common method of distinguishing living beings

from material objects: what is strange about living beings is that they, like us, in part and in whole, seem to have a purpose. The first thing to note is that Bergson's teleology is real, it is not merely epistemological. In the *Critique of the Power of Judgement* Kant, like Bergson, recognised that nature can never be understood in its inner organisation if it is "considered as a mere mechanism", yet unlike Bergson he thought that what lies beyond the limits of mechanical understanding can only be thought 'reflectively' (Kant 2000: AK 360). For Kant, we cannot understand the causality of nature, we can only reflect upon it teleologically, *as if* it acted intentionally according to ends. The only way Kant could avoid the unsatisfactory view that nature is *actually* blind mechanism is to adopt the view that it is *problematically* teleological. That is to say, to think of nature at all is to think of it as intentional, or as possessing agency, but we cannot know this to be the case. Teleology for Kant is a regulative rather than a constitutive principle for judging the apparently non-mechanical causality of nature, a causality that confounds mechanism (Kant, 2000: AK 360-1). There is a clear parallel between Kant and Bergson on this point: both accept that mechanism cannot explain the causality of nature, but neither accepts a metaphysical explanation to be sufficient. However, whereas knowledge for Kant is limited to mechanisms – Bergson says his transcendental philosophy "reduces to a strict minimum the hypothesis necessary in order to suppose the physics of Galileo indefinitely extensible" (CE 228; O 796) – for Bergson we can re-integrate such mechanisms into a holistic understanding of the living systems that articulate them.

It is in this sense that the teleology that Bergson accepts is real and *external*, because the 'intention' of the wasp is not that of the individual or even that of the species but that of life itself as a common impetus. This leads to its second characteristic; the teleology is not placed in front of us as a guide (like an idea to be realised) but *behind us* as a unity that persists (visibly in cases such as these) among the terms it is dividing into: "it is given at the start as an impulsion, not placed at the end as an attraction" (CE 67; O 583). Indeed, given the inevitable fragmentation of life on the one hand, and the inevitable priority the fragments take for human experience on the other, it is to be expected that real unity will appear to us as a form of external teleology. It is on the basis of his thermodynamics of living systems, then, that Bergson is able to re-instate the

teleology that the scientific revolution had abolished, as the mode of explanation proper to life, just as mechanical science is proper to matter. It is frankly Aristotelian, although not that of Aristotle himself. Bergson is not claiming that the wasp fulfils an ideal plan by stinging the caterpillar in the 'proper place'! The closest teleology to Bergson's as far as I can tell is the peripatetic view of 'natural law'. Now this should not be confused with the 'laws of nature' of the scientific revolution; the 'objective' world that mechanical laws described explicitly ruled out teleology, as they did any kind of explanation that could be seen as analogous with subjectivity.

How does this teleology contribute to our understanding of the real efficacy of society as a level of biological organisation? We have seen that like an organism, life itself is efficacious: its action is holistic and articulates the heterogeneous elements that it includes. Again, to say that the action of the whole is not reducible to the action of its parts should not be taken to imply that the opposite is true and that the parts are determined to take their place within the whole. Each part lives for itself, at the same time that it is lived by the unity that articulates it: to all intents and purposes things happen *as if* each ant or bee lives for all the others, or for the society. If this language is misleading, it is not because the words 'for all the others' are too strong, but because the words 'each ant or bee' are too strong. When the ants construct their hill, what sense does it make to refer the actions involved to the discrete agents involved? If the ant were a discrete agent, it would not know how to build the hill in the first place. It is not that they are *acting for* each other, but they are *acted by* the living system that is the society. They are parts of that system just as the lungs and heart are parts of the organism. The only difference is that materially, their organisation is not apparent, and the intellectual focus on the solid bodies leads us to locate the real efficacy at the wrong level. This brings us to our final point: that the intellect by which Bergson characterises the mammalian line of evolution in many cases falls back into a kind of ecological instinct itself, when the necessity of adaptive evolution draws the whole of the animal's energy into merely surviving, leading it away from the creative evolution that would go on exploring.

Adaptation of the intellect re-interpreted as a lapse into ecological instinct

The enormous part that relations between predator and prey play in the evolution of species is widely recognised. If it is the real unity of life, or to put it another way the persistent continuity between dissociated species, that for Bergson explains the otherwise miraculous knowledge that a predator has of its prey, it is the real discontinuity between them that explains the media through which this knowledge is communicated: sensible qualities on the one hand, receptive faculties on the other. When Bergson writes in chapter three of *Creative Evolution* about the mutual exchange between matter and intellect, he is not claiming that material objects themselves are changed by our increasing ability to cognise them. It is the intellect that is *adapted to* matter, and exaggerates its tendency to space in thought. In the case of living or organised matter however, we can really say that the way in which we perceive a species will, over evolutionary time, effect a real transformation of its material form – a transformation in response to which our perception will itself transform. On this point, evolution necessitates a major revision of the epistemology developed by the modern empiricists, for whom perception was characterised by passivity or receptivity. The precision and qualities of perception are now commonly understood to be relative to the necessity of adaptation in the co-evolution of predator and prey across a number of species (see Parker 2003). For Bergson, as we have seen, such adaptations would account for the superficial details of perception rather than perception itself, but the superficial variations can nevertheless in many cases replace, to all intents and purposes, the profound and creative evolution that underlies them.

Hence, although Bergson does not say so explicitly, in this sense *adaptation* is the danger that lay in wait for the animals he describes becoming 'trapped' in their own immobility through the necessity of making themselves inedible (CE 84-5; O 605). But it is not only adaptations that 'resemble' inertia that show us an arrest of creative evolution in the face of the necessity of adaptive evolution: the evolution of the Gazelle and the Cheetah in the direction of increased speed, perception and camouflage on both sides expresses the extent to which they have trapped each other into a cycle that may have a creative evolution at its source, but does not offer it leave to explore the possibilities of

life outside the development of these skills. Potentially creative species ensnare each other in a predominantly teleological evolutionary 'arms race'. Thus we arrive at the somewhat surprising conclusion that an excess of adaptation becomes an inhibition of creation; it seems the creative exploration of the possibilities for what life can become is best performed where there is just enough adaptation to keep us alive (we may think here of the comparative 'weakness' of the human animal, which the intellect compensates for). We will see in chapter three that there is something of an analogy with predation in the associationist aspect of human society, for this is also an adaptation to the necessities of surviving in a fragmented environment that includes an element of competition – it will open up the whole question of the degree to which sympathy has been replaced by antipathy in the human.

The creative drive that is the profound source of the dissociation of living systems exhausts itself in the production and maintenance of them: first the plant, then the animal and then the mammal, succumbs to the practical necessity of spending all its creative energy adapting itself to the challenges its individuation within the environment thrusts upon it. To the extent that evolution continues, it is a superficial evolution, an adaptation of species to their material environment and to each other. Again, this is a fact that cannot be grasped if adaptation was taken to be the engine of a linear evolution in the first place. The difference between the plant and the animal, and the human and the rest of the animal world, is one of kind, and not merely of degree for Bergson (CE 88; O 609-10); it is the difference between mere survival and continued creation, and in this sense echoes the task he will say faces human culture, at the end of *The Two Sources of Morality and Religion*. In the next chapters we will see how the intellect, itself an adaptation and therefore superficial, can recover through the indetermination of its action a more fundamental creativity than that which nature allowed it. As Bergson says, the tool that has a range of potential uses reacts on the nature of the one who uses it, introducing an indetermination into their activity. As we will see in the next chapter, when the intelligence is reflective, and the tool an idea, an evolution of culture that is not determined by natural evolution becomes possible.

Bergson's view of life as organisation makes it possible to understand society as immediately biological. The shift from characterising what is substantial in life in terms of matter to thinking of it in terms of an organisation *of* matter allows us at one fell swoop to view the social organisation of individuals as just as robust and substantial as any organisation of cells, organs or systems within an individual. At a biological level – a biology liberated from materialist metaphysics – the social cannot be reduced to the activity of individuals: both must be related back to the evolution of life, in the particular sense that Bergson understands it. The implications of this for our (intellectual) attachment to explanations based around the agency of the individual could not be more serious, and will occupy us throughout the rest of the thesis.

Chapter Two – The Cultural Evolution of Society

Society is a biological reality for Bergson, we have established only this much so far. But society is not a *merely* biological reality, and while clarifying its place in biological evolution is necessary to our understanding of human society, it is not sufficient. In developing a model of evolution in which the evolution of society is not subsequent to that of the individual, Bergson is able to avoid one of the major mechanistic prejudices of biology: the idea that nature stops at the individual body of the organism. His engagement with the relation between society and individuality can, then, take place outside the terms of the antinomy that follows from this prejudice: that culture can either be reduced in its entirety to a biological cause or treated as entirely independent of biological causality. Indeed, a solely biological account would invite reductionism, just as the absence of any concept of natural society invites relativism, and we will see in section one that Bergson's work can contribute to contemporary debates in sociobiology precisely because it avoids both extremes. For him, social evolution is a cultural as well as a natural process, and in section two we will see just what is to be given over to nature, and what is to be kept as a human contribution, in the social realm. In the third section we will complete our account of Bergson's social thought by clarifying the particular sense in which he affirms that the cultural evolution of human society may free itself from the biological conditions that continue to dominate in other species.

In *Creative Evolution* Bergson was content to trace the dissociation of society and individuality along the two main lines of animal evolution. He placed great importance on the fact that each line is not in exclusive possession of these characteristics, but has a tendency to emphasise them. In that book he went no further. He acknowledged that each level of organisation, social and individual, still persists on the line characterised by the other, but how it persists, what it does there, and how it affects or interacts with the other tendency was left in question. It is not until *The Two Sources of Morality and Religion* that Bergson turns his attention to the cultural development of the human line of evolution with an emphasis on the continued and active presence of the social in the species characterised by individuality. This social level of organisation plays

a crucial role in his treatment of both morality and religion, with the two levels of biological organisation, social and individual, underlying his distinctions between nature and culture, function and form, and necessity and contingency.

Bergson often uses the musical model of 'variations on a theme' to express the relation between what is necessary and what is contingent in a given context. With human society, understood as both a natural and a cultural process, it is the biological organisation that is necessary. The ability of individuals to form associations among themselves is not constitutive of society, but merely of the contingent state forms it takes. Any contract, any association, takes place in the context of an already existing level of social organisation that is prefigured in and operative through individuals. We cannot reduce human society to a contract between individuals as its ultimate cause, for individuals only participate in an autonomous activity of society itself; they do not so much form it as *finesse* it: "if nature, and for the very reason that she has made us intelligent, has left us to some extent with freedom of choice in our type of social organisation, she has at all events ordained that we should live in society" (TSMR 229; O 1201-2). Bergson constantly emphasises the insufficiency of attributing a psychological (and therefore individual) origin to society – its roots lie deeper: they are in the biological organisation *of* individuals, a social organisation that is involuntary, inevitable, yet indeterminate enough for individuals to take part in constructing it in its final detail.

The Persistence of Society in Individuality

Bergson utilises a number of dualisms in his account of human culture: nature and culture, society and individuality, and what he calls the 'open' and the 'closed'. In this section I will be concerned primarily with the first pair, nature and culture, and the relation between them. In outlining Bergson's account I will emphasise the critique he allows us to develop of those social theories that attempted a decisive reduction of cultural events to biological causes (particularly the sociobiology of the nineteen seventies and the evolutionary psychology of the nineteen nineties). Aside from his general rejection of determinism as an unfounded hypothesis, another reason culture is irreducible to

nature for Bergson is the fact that it evolves independently of natural conditions. This is not to say that it is not articulated by nature in its broad outlines, but that its details are developed by successive generations of free individuals in forms that are in no sense given in the natural function (and on this point Bergson allows us to develop a critique of the meme theory of culture as not reducible to but analogous to genetics, as developed by Dawkins and others). The natural evolution of society and individuality are necessary to an understanding of the evolution of culture, but they are not sufficient to account for the contingent forms it takes. Culture can neither be directly reduced to a biological organisation of society, nor indirectly reduced to the actions of individuals who are predisposed to a certain social form (as we will see, there is a two way causality between the individual and society that is both constitutive of, and sensitive to, the cultural as well as the natural dynamics of society). Hence, Bergson avoids both reductionism and relativism, developing instead an understanding of 'cultural variations' on a 'theme' provided by nature. The key points arising from this section will be:

- there is a real social organisation of humans at the biological level, which predisposes the action of the individual to fulfil certain essential functions, without determining it in its specific form (on this basis we can develop a critique of reductionist sociobiology)
- there is an evolution of cultural forms that takes place independently of biological functions, leading to institutions, norms and behaviours that are not given by nature (it is on this basis that Bergson refuses to distinguish 'primitive' and 'civilised' people on biological grounds)
- the social organisation is evident in the form of a 'virtual instinct', suggesting a real sympathy between individual consciousnesses; this sympathy is the source of the organising power natural society retains over free individuals

In the last chapter we saw the close correspondence between Bergson's views and those of various non-reductionist biologists today. While this in itself does not make Bergson important (biologists such as Mae-Wan Ho and Brian

Goodwin might read and even admire *Creative Evolution* but it would be naïve to claim that they can learn a great deal more from it), the fact that there has not, as yet, been any extended engagement with the implications of this biology for society, means that Bergson can justifiably be said to have an important contribution to make: his work in *The Two Sources of Morality and Religion* can provide a model for what we might call 'a sociobiology of open systems' (the name isn't important).

Society is a real level of biological organisation for Bergson, evident in the form, behaviour and architecture of the polymorphous ants and bees. The question we face now is that of how this level of organisation, which is not the sole possession of the insects, but is merely the defining characteristic of their line of evolution, is present on the human line of evolution where the defining characteristic is individuality. Does it mean that the freedom and contingency of individual actions is merely apparent and that we are determined as individuals by a biological organisation that operates at an immediately social level? Not for Bergson, who preserves the reality and efficacy of *both* levels of biological organisation along the human line: "each of us belongs as much to society as to himself" (TSMR 6; O 986). In this section, I will examine three ways in which Bergson distinguishes the organising activity of society in the human species from determinism: first, he limits the biological influence to the determination of individuals to have *some form* of social organisation at the cultural level; second, he attributes the cultural level of social evolution to the free and contingent contributions of generations of individuals; and third, he identifies what he calls a 'virtual instinct' in humans themselves, meaning that society is not something extrinsic to the individual that acts on them from the outside, but a real aspect of their consciousness that articulates, without determining, them from the inside. Let us take these points in turn.

Sociobiology

In admitting that culture is determined to exist by nature, but not to exist in any particular form, Bergson presents us with a *relation* rather than a *choice* between determinism and relativism. This is the basis of the contribution he is able to

make to the biological study of society. The sociobiology of the nineteen seventies and eighties failed to recognise the biological *reality* of society, seeking instead its biological *cause*. For this reason, it overlooked the fundamentally double nature of humanity, as *immediately* social and individual, and thus embodying a tension between two different levels of biological organisation simultaneously acting on each of us. In the absence of any concept of real social efficacy, both the advocates and certain critics of sociobiology ended up occupying the two sides of the antinomy that arises from the representation of a real system as a discrete multiplicity. However, in the case of sociobiology, the determinist side was not characterised by a hypothesis of universal mechanism, simply because no-one could actually believe that every detail of human culture could be reduced to biological causes, but rather by a methodological hypothesis that some features of human society could be, and that each social fact or event was *either* determined *or* contingent. For Bergson, who in *The Two Sources of Morality and Religion* re-integrates the individual in the social organisation that is their true context, it is rather a matter of identifying *in which respects* any behaviour is determined (by social organisation) and in which respects it is contingent (on individual action). Hence, when speaking of moral obligation he can say that "we are dealing here with only one particular point, human nature *in so far as* it is predisposed to a certain social form" (TSMR 236; O 1208, my italics). When dealing with the other point, human nature in so far as it is predisposed to individual freedom, Bergson can say that it is free to develop whatever form of society it wishes (and to the degree that it is predisposed to certain ones it is on the basis of cultural rather than natural history). Let us examine the determinism of sociobiology more closely, in order to demonstrate the value of Bergson's more precise identification of the social articulation of free individuals.

At the most general level, sociobiology has always dealt with the relation between society and biology by seeking to establish a biological basis of social behaviour. It is, then, frankly reductive, in that the relation of biology to society is always one of ground to consequence. However, sociobiology has suffered as a field from a confusion between theoretical assumptions and ideological implications in the debates that followed the publication of its founding text, Edward O. Wilson's *Sociobiology: The New Synthesis* (1975). Bergson's

account of the persistence of social organisation alongside individual organisation can not only help finesse the theoretical difficulties of sociobiology, but can help us distinguish exactly what they are in the first place from among the confusion of ideological criticisms. We can thus arrive at an understanding of the real, rather than abstract, determinations that are at work in the evolution of human culture (this is a distinction that escaped Durkheimian critics such as Albert Bayet, for whom an even partial analogy between the human and the insect invited biological determinism; what rational sociologists do not always appreciate in Bergson is his allowance of real determinations within a fundamentally free or creative social evolution).

The central question of sociobiology (insofar as it applies to human societies) regards the possibility of a biological account of human social behaviour, although what is at stake is by no means clear, as the debates have been heated, ideologically loaded, and the biological and political dimensions are not always clearly demarcated. On the biological side, the quarrel has been between biological reductionists on the one hand and those who recommend a dialectical or holistic account of the relation between society and biology on the other. The political debate has been focussed around the question of genetic reductionism as opposed to cultural difference and free will in the explanation of (usually human) behaviour. This might sound like an interdisciplinary conflict between science and social science, but it is not. As Ullica Segerstråle has noted, "the quarrelling parties all called themselves evolutionary biologists" (Segerstråle 2000: 3).

The main theoretical problem of sociobiology lies in the way it lifts explanations that had been applied to individual organisms, and attempts to apply them to the group, thus effacing the real dynamic Bergson identifies between two levels of organisation that differ in kind (instinctive and intellectual, determining and indeterminate). In this context, sociobiology is directly analogous to deterministic biology: the task is to find genes for organic events – physiological or functional events in biology, psychological or behavioural events in sociobiology. The theoretical components of sociobiology are essentially those of neo-Darwinism: genetic variation, heredity, adaptation and natural selection; the problem is how these mechanisms operate at a social level. However, it is by no means clear that these theoretical elements can be extrapolated in such a way.

Indeed, much of social behaviour would seem to refute the grip these mechanisms have even over the individual: "social behaviour in organisms seem to provide convincing empirical refutations of the validity of the whole of evolutionary theory" (Caplan 1978: 4). Even primitive organisms manifest complex social behaviours that suggest the inadequacy of neo-Darwinian genetic mechanisms for explaining evolutionary change. Scientists can get away with explaining the 'hard' characteristics of individual organisms with theories about genetic variation, transmission and selection, but how could selection and variation combine to produce sterile subpopulations of species such as the worker castes of many hymenoptera that have no capacity for reproduction? It is problems such as these that stand at the origins of sociobiology, highlighting the necessity of studying the social apart from the individual.

Darwin was aware of the challenge that sterility (another key phenomenon was altruism) presented to his theory of the natural selection of advantageous characteristics. He, along with others such as J.B.S. Haldane and Sewall Wright, developed a theory of group selection, the idea that the inability to reproduce (or the tendency towards self-sacrifice) could be biologically advantageous to groups rather than to individuals. The model of group selection was soon superseded in the history of ideas because of the implausibly complex environmental conditions that were necessary in order to explain the selection of social organisations that included disadvantageous individuals. Nevertheless, it is on the same basis – that of Darwinian natural selection – that sociobiology continued to conceive of individuals in terms of a profit and loss relationship to their environment (and it is on this basis that we can understand the obsession in sociobiology with attempting to explain altruism, a characteristic that should make an individual less likely to survive, but is in fact fairly ubiquitous). The way in which sociobiology approaches such questions comes down to its neo-Darwinian conceptual structure, where every function and form of an organism is regarded as an adaptation, and therefore its evolution is a determinate event that can be brought back to genetic variation and natural selection as ultimate cause.

As I have said, every sociobiologist knows that something as complex as human culture cannot be reduced in its entirety to a biological cause; the problem is not that of universal mechanism, but how it conceptualises the social mechanisms that do exist. It is the framing of the questions in a conceptual

structure based around an adaptationist model of evolution that is the problem, and it is this that Bergson's philosophy can provide an alternative to. He thus enables us not only to oppose what is abstract in sociobiology, and to replace it with the identification of real determination, but also to see the problems in the debates about sociobiology which focussed around the refutation of total determinism, often by appealing to a rarefied conception of society as an abstract entity entirely independent of biological organisation; an approach that Bergson is equally opposed to. Let us examine these debates before looking at the different response Bergson allows us to develop.

One can see why sociobiology was interpreted and refuted in this way. Sociobiological reductionism is reminiscent of the reduction of mind events to brain events in an identity theory of mind. Indeed, Edward O. Wilson describes the physiological reduction of mind as a step towards a complete sociobiology: "the transition from purely phenomenological to fundamental theory in sociobiology must await a full neuronal theory of the human brain" (Wilson 1975a: 525). A direct consequence of the neurophysiological reduction of mental states to brain states is the subjection of mental pathology to medical treatment. That is to say, identity theory of mind directly contributes to an epistemological climate in which the medication of the individual is deemed the only effective response to emotional problems. The implications of biological reductionism are similar. The implication is that sociological measures can only mitigate social problems. Curative or even preventative measures are the province of genetics. In practical terms this would include eugenic practices such as genetic screening and engineering, and at one point in his *Sociobiology* Wilson himself describes the project as a guide for the managers of evolution. Neither the extent, nor the ideological dimension, of the opposition this view raised in the sciences and the humanities is exactly surprising. Wilson's own project was openly ideological insofar as it involved establishing the monopoly on the explanation of social events. In practical terms this meant establishing the methodological superiority of sociobiology over other forms of reductionist scientific explanation – or as he puts it incorporate them in a New Synthesis – as well as disenfranchising sociology itself. Of course, this synthesis is really a reduction or translation of one science into the terms of another.

The project of a non-reductive sociobiological synthesis lies in

developing a method of investigating what remainder there is in such a translation, in this case by demonstrating the aspects of social life that are irreducible to a biological cause. Critics of sociobiology have tended to do this in two ways: dialectically or holistically. The dialectical approach is analogous to vitalism in biology, suggesting a reality of the social apart from the biological. Closer to Bergson's views is the holistic approach, which accepts a biological reality of the social, but refuses to reduce freedom and individuality to it, examining instead the mutual influence and two-way causality they exert on each other. The first approach was that taken by the Sociobiology Study Group and the Dialectics of Biology Group in the nineteen eighties (and taken perhaps further by Durkheimian sociologists). The second is the more contemporary, lying closer to the re-interpretation of genetics away from determinism that we examined in chapter one.

In his introduction to *Against Biological Determinism* Steven Rose identifies "a recent intensification of deterministic explanations of human behaviour" as the context for a project of understanding "the dialectics of biology and society in the production of mind" (Rose 1982a: 6 & 2). For Rose, it is the deterministic explanation of evolution that is taken to task, and the dialectic of society and biology in an open-ended process of evolution that is examined. However, we cannot ask how social events can be considered in their irreducibility without considering what conception of society this irreducibility leads to. Importantly, we need to acknowledge that reason can go too far in the opposite direction, towards a problematic rarefaction of society. Durkheim, for example, goes beyond the claim that social events are too complex to be reduced to the terms of individual biology. He claims that they can be reduced to the terms of a rational sociology: "to understand the way in which a society thinks of itself and of its environment one must consider the nature of the society *and not* that of the individuals… the symbols which express these conceptions change according to the type of society" (Durkheim 1938: *xlix*, my italics). In ruling out the possibility of a biological reduction, Durkheim introduces all the problems of a sociological rarefaction instead. How are we to understand the interaction between the two orders, social and individual when one is biological and the other symbolic? This difficulty is not peculiar to rational sociology. It is a difficulty that critics of reductionist sociobiology can easily fall into. We can see

it in Sahlins' *Use and Abuse of Biology*: "men interact in the terms of a system of meanings, attributed to persons and the objects of their existence, but precisely as these attributes are symbolic, they cannot be discovered in the intrinsic properties of the things to which they refer" (Sahlins 1976: 11-12). Recall that for Bergson, the biological facts that are here called symbols are in fact a real point of interface between the biological and the social (insofar as the intellect is social). For Bergson the liberation of the social from scientific practices whose exclusive focus on the efficacy of the individual register it only as an effect would not involve the rejection of those practices where they are properly applicable.[26]

How does Bergson avoid both the biological reduction and the sociological rarefaction of society? How does he maintain the irreducibility of society to biology without reintroducing a dualism between biology and society and a dialectical account of their relation? In fact, the problem with sociobiology does not pertain to an absolute opposition between the reduction and rarefaction of society, but to the way in which particular determinations are conceptualised by sociobiology. The problem is that where it does see determinations, it sees them applied to specific social forms, or specific forms of behaviour. Now, as we have seen, for Bergson this is the case with the ant, where the social level of biological evolution is the dominant and active one. But in a mammal, or even a human, it is the mere functioning of the social organisation that is essential; all it determines us to is the necessity of living in society. The form of that society, and of our behaviour within it, is not determined insofar as it is contingent on the individuals freedom to organise themselves, and not contingent insofar as no individual is free to default from participating in some form of social organisation. The adaptationist tendency to conflate form and function under a single model of variation and natural selection limits sociobiology to asking of each particular social form if it can be reduced to a biological cause or not. Where the answer is yes, the form itself is brought back to necessity, total determination, yet only with reference to the superficial adaptive level of evolution. Where the answer is no, the form is left to relativism, total contingency. In separating the function and form of society through the identification of the double level of organisation at work in the human species, Bergson can reveal how, in every single case, the function is necessary and the form is contingent. Thus, by limiting sociobiological explanations to the

function, he both affirms the reality of determination and leaves a place to contingency in human action.[27]

Cultural Evolution

We have seen that there is a biological theme – *there must be society* – which persists through the variety of cultural forms society actually takes. What we must now ask is how Bergson distinguishes the evolution of society at a cultural level from a biological evolution of the individuals who take part in creating it. That is to say, the fact that the form of human society is not actually given in the intellect or the physiology of the individual, as it is in the ant, does not in itself free culture from a biological determinism, just from a sociobiological determinism. It is this fact that was recognised in the project of evolutionary psychology, which took over the reductive project of sociobiology in the nineteen nineties and continues today: the form of human society might in many cases be contingent upon the actions of individuals, but we could still argue that those individuals themselves, in every detail of their consciousness and behaviour, are biologically determined. Thus we would have an indirect reduction of society to biology, or culture to nature, via the individual.

In order to demonstrate that this cannot be the case, we can refer to Bergson's claim that the cultural evolution of social forms is not reflected in the fundamental biological and psychological nature of individuals (although he makes this claim in relation to a different problem, as we will see). However, Bergson's argument here rests on the impossibility of Lamarckian evolution – the fact that physiological or behavioural characteristics acquired by an individual during the course of their life *cannot* become hereditary, and this is a fact that is beginning to be challenged by the same non-reductionist biologists who are consistent in almost all other respects with Bergson's model of creative evolution. This is a difficulty we will have to deal with. However, it is not fatal to Bergson's preservation of an independence of cultural evolution, since the fact that characteristics *may* have been acquired does not suggest that they were not in the first place developed freely and contingently.

In showing that there is not a correspondence between the evolution of

the individual at a cultural and at a natural level, Bergson's purpose was to demonstrate that the original demand for social organisation persists through all its variations in human beings. What I want to derive from the same fact of non-correspondence is a refutation of the view that it is a natural evolution of human consciousness that determines individuals to associate in societies in a particular way: if the nature remains more or less unchanged, the behaviour of individuals and the cultural evolution that is contingent upon it cannot be determined biologically.

When Bergson demonstrates that there is a cultural evolution that overlies nature without becoming blended into it, he also establishes that that culture is not a mere epiphenomenon of natural evolution. The question we face, then, is how, and at what point, can an independent cultural level of organisation arise out of nature. It is in the context of his discussion of religious belief that Bergson brings up the issue of recent human evolution, suggesting that superstition is present in 'civilised' communities just as it is in 'primitive' ones (TSMR 83-91 & 117-37; O 1061-69 & 1092-113). He is confronting Lévy-Bruhl's anthropological study *La Mentalité primitive* of 1922; a text from which Bergson takes a lot of information about primitive cultures, but which he sees as deeply flawed on a theoretical level. The problem, for Bergson, is Lévy-Bruhl's identification of a different type of consciousness in primitive and civilised peoples, due to the fact that the evolution of the latter has progressed beyond the stage of superstition due to the development of scientific explanations that supersede mythological explanations. Bergson refuses to admit this, because for him it implies a conception of evolution – the Lamarckian notion that physiological or psychological characteristics acquired during the life of an organism can become hereditary, and thus accumulate over time to advance the species in certain directions – that had seemed at the time to receive a practically definitive scientific refutation (the question has been re-opened today in the context of the fluid genome which is no longer sealed off from its organic context as was the germ-plasm of Weismann, which provided the model of the relation between genetic and somatic material that Bergson made reference to).

For Bergson, the progress away from 'primitive' superstition and towards 'civilised' rational science is not a natural, but a cultural evolution: "if you eliminate from the man of today what has been deposited in him by unceasing

education, he would be found to be identical, or nearly so, with his remotest ancestors" (TSMR 235; O 1207). The structure of the mind remains the same in each case, it is the culture that has evolved, for it is the repository of the accumulative acquired knowledge that characterises civilisation. There is more than just a response to Lévy-Bruhl involved here. There is a rejection of any attempt to distinguish so-called 'primitive' and 'civilised' people at a natural rather than a cultural level. Indeed, after establishing in *Creative Evolution* that the intellect is what marks the appearance of the human species within the animal world, for Bergson to count 'primitive' people as pre-rational would be akin to counting them as 'pre-human'. Primitive or civilised, Bergson insists that "the structure of the mind remains the same" and that an accumulation of experiences acquired by successive generations are "deposited in the social environment, and given back to each of us by these surroundings" (TSMR 84; O 1062). For Bergson, this is sufficient to explain why we do not think like uncivilised man: the mind functions in the same way in both cases, it is just not working on the same material. On the one hand, the scientific developments that characterise 'civilisation' merely bring to a degree of extreme precision the tendency of the intellect, and Bergson insists that there is no essential difference between the primitive and the civilised man in this respect; even in the so-called primitive society supernatural causes were only attributed either to actions that were particularly indeterminate or to events of extreme significance; and even in these cases there was still the intellectual recognition of mechanical causality, it is just taken for granted and not referred to (TSMR 117-25; O 1092-102). On the other hand, the religious and mythical practices that characterise the 'primitive' social structures are related to a specific function of fabulation that is necessarily implied by, and must have developed alongside, the intellect. Hence Bergson's remarkable formulation that it is only rational beings who explain their existence in irrational ways, but I will return to his account of religion in the next section.

If we accept, for now, that there is a cultural evolution that overlays nature, and that it is not a surface effect of natural evolution itself, we must inquire after its origins. If culture is really not determined by nature, then where did it come from? Let us be clear about what we are asking; the mystery seems to lie in the fact that nature does perfectly well in the countless cases where it is not complemented by culture, so what natural need does culture address? It

cannot be dismissed as a kind of phosphorescence that nature gives off, as determinists sometimes try to dismiss consciousness, for culture is efficacious, even if it always ultimately derives its drive from a natural instinct. We will address this question of the general function of culture and the relation between instinct and intellect shortly. For now, let us note that for Bergson, culture cannot be an emergent property of a sufficiently complicated natural evolution, just as consciousness cannot be an emergent property of the brain. In fact, the two properties – culture and consciousness – are closely related for Bergson; they share the same date of birth: it is the appearance of the first tools that mark the arrival of a "particularly *human* intelligence" (CE 89; O 611). While it is a virtual instinct that underlies the necessity of human society, it is our actual intellect that creates the cultural evolution of social forms. Let us now examine the relation of these tendencies in more detail, and see how society is not an extrinsic determination of individuals to act against their nature, but is present in consciousness itself as a fundamental part of their nature.

Virtual Instinct and Intellect

What is Bergson telling us in *The Two Sources of Morality and Religion* when he continually oscillates between describing human society as analogous to an ant hill, and insisting that the analogy is inadequate?[28] The analogy stretches as far as the determination of humans to maintain some form of society, and it is the freedom of the individual to create that form that marks the limits of the analogy. However, we must understand the different senses in which this analogy is limited. On the one hand it is due to the double nature of the human as both social and individual; there is something extra in the human, an individuality that the ant does not have. On the other hand, this does not mean that humans are automatically analogous to ants insofar as they are social; that the analogy stands if we bracket the individuality of the human. There are two reasons for this: first, society and individuality are two tendencies within the human and are in no sense separable anyway; and second, the social tendency of the human differs in kind from that of the ant because it is virtual rather than actual. Let us take these points in turn.

In *Creative Evolution* Bergson does allow that there are "degrees of perfection" of instinct "which correspond to so many complications of the social life" within insects (CE 107; O 636). Yet between insects and humans there is a difference in kind, the difference between automatism and freedom. Let us take the material construction of society as an example: as I said earlier, the individual ant does not participate in the construction of the hive any more than my fingers participate in the writing of this thesis. The 'individual' ants (insofar as we can say there are any as far as life is concerned) are directed in the detail of what they do by their instinct – a sympathetic consciousness that is the possession of the society rather than the individual, a heterogeneous consciousness that determines different individuals to different specific tasks – and their physical structure, again a property of the society (the true 'organism') which, like their consciousness, is heterogeneous or 'polymorphous' thus physically as well as psychically riveting each individual to its task like the parts of a machine. In the construction of a human society on the other hand, whether the building of a hall or the drafting of a constitution, the individual human participates freely in a way that has a real influence on the final product. Nothing of the form of society is given by the virtual instinct, only the necessity of constructing some form of society. Thus, while "the hive is really, and not metaphorically, a single organism" (CE 107; O 636), the human society is "a collectivity of free beings" (TSMR 3; O 983). The organism, the active organising agent, is the individual, even though they are determined to perform the task in the first place. Jean Nabert has put this very well: the intellect is "strong enough to keep instinct in a state of virtuality, but not strong enough to prevent itself being used [*pipée*] by it, that it was not bowed down before its demands" (Nabert 2008: 606, my translation).

This brings us to our second point: the instinct of the human is distinguished from that of the ant by its relation to the intellect. Indeed, it is the development of an actual intellect in humans that keeps the other tendency towards instinct in a virtual state. Once individuals are conscious and free, there can be no automatism (although there can be obligations and habit), and society must find ways of continuing its necessary activity through this contingent new medium. Hence, Bergson does not say that the ants show us *what we are in so far as we are social*, but *what we would have been if we were not individual*: "no

one obligation being instinctive, obligation as a whole would have been instinct if human societies were not, so to speak, ballasted with variability and intelligence" (TSMR 18; O 998). Here again, we find an asymmetry between two tendencies: where instinct is actual, intellect is 'asleep' – it is always there in principle, and there is always the potential for it to reawaken, but as there is no need for it, it does nothing and consequently to all intents and purposes is nothing; where intellect is actual, on the other hand, instinct is still necessary and consequently still there and still active. Hence, while the society of ants is characterised by determinism, that of humans is characterised not by freedom, but by freedom *and* determinations. As Nabert has noted, in *Creative Evolution* the human was characterised by intelligence alone, but in *The Two Sources of Morality and Religion* it is characterised by the relation (or *tension*, as I will say) "*between* intelligence and instinct" (Nabert 2008: 605, my translation).

What is the relation of this virtual instinct to the intellect? In different senses, activity, passivity and causality can all be attributed to the virtual social instinct *and* to the actual individual intellect, meaning we must, on every point of conscious and cultural activity, discover first of all who or what it is that *is* acting. None of these questions arise in the case of the ant. It is the double nature of the human that raises them (and as we will see, this duality of social and individual is subsumed by Bergson under an even more fundamental duality between the open and the closed, complicating things even further). Jean Nabert has done a wonderful job of clarifying this set of issues. After rejecting Bergson's work on the basis of its dualism (and he would have been quite right to do so if Bergson *had* been a dualist in the metaphysical sense), Nabert saw in *The Two Sources of Morality and Religion* that the problematic opposition of intuition and intellect was reconciled in a profound double nature of reality and of consciousness – the double nature of tendencies differentiating out of each other and progressing in contrary directions. In his article on the relation between instinct and intellect in the human he describes how the intellect could only displace instinct by becoming its servant (Nabert 2008: 606-7).

All of this reveals some rather surprising implications of Bergson's account of society, which as far as I know have not been noted. They arise from the asymmetry between instinct and intellect that I mentioned earlier. First, it is due to the fact that instinct remains virtual, that society is real at a cultural level

in the human. Where instinct is actual in the ant and bee, it is indiscernible from the organisation of nature itself: "it only carries out further the work by which life organises matter" (CE 107; O 635). How, then, can we call an ant-hill or bee-hive a society? If, as Bergson says, "the hive is really, and not metaphorically, a single organism" (CE 107; O 636), then it must be metaphorically, and not really, a society. What, in that case, does this metaphor that Bergson constantly uses, and constantly criticises, tell us? It would tell us that an ant-hill is only a society *for us* when viewed from the outside and represented symbolically in terms of our logic of solids. Bergson's whole project in *Creative Evolution* was to grasp life from the inside, to describe it according to its own logic of organisation, and insects are not social according to that logic, because they are not individual. Bergson does not even raise the possibility of a 'virtual intellect' in the ant. At the moments where he could do so, we have instead the purely hypothetical 'awakening' of consciousness in the ant; it is always a fairy-story or parable. Bergson might draw an analogy between human society, insofar as it is structured by relations of obligation, and the necessity of the ant-hill, but he is only able do so on the basis of a prior analogy that he does not acknowledge between the ant-hill, insofar as it *materially resembles* a society of individuals and the human society that *really or 'functionally'* is. When we consider an ant-hill a society, we are doing so by analogy with ourselves; in itself, it is an organism.

So we reach this conclusion: we find in Bergson, although he does not explicitly say so, that human society is the only real society in the natural world, because it stands out in relief against the individuality that threatens it (as I have already noted, I have some serious reservations about Bergson's views on the animal world and I will deal with these in the next chapter). If the ant-hill were analogous to us in any sense, it would be to our individuality, on Bergson's view, as the homology would be between the efficacious level of organisation in each case, not the material resemblance that the eye and the intellect settle upon. Even then, the analogy would not take into account the pressure that our society exerts on that individuality, something for which there is no direct correlate acting upon the ant-hill (I will not go into the issue of the ecological articualtions that are obviously at work upon it, and which we have seen have an even larger role in what we called 'ecological instincts'). To summarise: there can be no analogy,

full or partial, between the ant and the human, because there is no correlate in the ant for the double nature of the human. It is this double nature, arising with consciousness, that is at the root of cultural evolution – society, individuality, consciousness, freedom of choice and obligation arising together as the effects of the dissociation of a self-organising indeterminate system within its environment.

And we can now understand the remarkable shift that occurs on this point between *Creative Evolution* and *The Two Sources of Morality and Religion*. In the former text, Bergson describes the dissociation society and individuality along two different lines of evolution. In the latter text, this dissociation takes place along one of the lines, leading to the double nature of the human, and not along the other, leading to the single organism that is the ant-hill. Thus, we can understand why Bergson could say, in *The Two Sources of Morality and Religion*, that the brunt of the social impulse ended not with the ant, but with the human:

> If one could speak, otherwise than metaphorically, of an impulse towards social life, it might be said that the brunt of the impulse was borne along the line of evolution ending at man, and that the rest of it was collected on the road leading to the hymenoptera: the societies of ants and bees would thus present the aspect complimentary to ours. (CE 66; O 580-1)

It is in humans, where instinct remains virtual and society is continually under threat of dissolution from the counter-tendency towards individuality, and not in the 'social insects', that society attains its full reality. If it does attain its full actuality in the ants, as Bergson claimed in *Creative Evolution*, this actuality means that the individuals "only exist in the interest of the whole" (TSMR 97; O 1074), and that to all intents and purposes there is neither society nor indivduality but organic unity. It is only by remaining virtual that society can become real in the human species, and it is only via the intellect that it can become cultural. Thus we reach our final conclusion: society in the cultural sense, as a persistent unity among free individuals, could only actualise itself through the contrary tendency of individuation. It is this point that will lead us forward, for as we will see, it is only through society, or the real cultural evolution of humanity, that the intellect can actualise its potential to intuition. But I must not get ahead of myself. Let us see first why the double nature of humanity results in a tension,

and how this tension is expressed in the specific cases of morality and religion.

The Function and Forms of Social Cohesion

In this section we will look at Bergson's account of how the functions that underlie morality and religion arise out of the dynamics of the social and individual levels of organisation, how specific forms of moral and religious practices take form due to the contributions of free individuals in the creation of culture, and how the intellect effaces these processes and attributes morality and religion to the ideas which are in fact the end product of these complex interactions. Insofar as morality and religion serve to safeguard social organisation from the dangers individuality poses, they do so in opposite ways, morality preserving society directly by correcting the excesses of individuality, and religion (for the most part) doing so indirectly by communicating a confidence to the individual. There is another difference between them that Bergson does not explicitly describe as such, but is perhaps even more interesting from the perspective of social dynamics: in morality the social force acts on one indivdual via the medium of another individual; in religion it acts through a single individual via the medium of a fictional individual, which can be as fleeting as an imagined intention immanent in a material event. Bergson describes how the action of society upon our will and imagination is reflected on the intellectual plane in terms of self-sufficient and peremptory ideas (the idea of 'good', the idea of 'god', the 'law', the 'state') that actually efface the push and pull of the social and individual levels of biological organisation. As we saw in the previous section, sociobiology seeks the genetic causes of these ideas; in this section I will examine the role these ideas play in emancipating humanity from the biological conditions of evolution. The central issues arising in this section are:

- the double nature of humanity as both social and individual results in a tension between these two levels of organisation; it is this tension that is experienced as obligation, just as the co-operation between them is experienced as faith

- the efficacy of social organisation works through individuals; it is not an extrinsic force – if it is represented as such this is because consciousness, arising in the hesitation that occurs when the two levels of organisation resist each other, experiences the whole of itself under one of its sides – its *individuality*
- morality and religion are exemplary of the rarefaction of this essential tension on the intellectual plane, where the ideas that represent the double forces at work on us are taken to be external and determining by moral and religious idealists, ideal and (genetically) determined by sociobiologists

So far, we have considered generally how the contingent evolution of culture can be articulated without being determined by the necessity of social organisation at a biological level. It is time to look at how the dynamics of this articulation play out in the specific cases of morality and religion, with a particular focus on what is to be given over to social organisation, and what is to be kept for human agency, in moral and religious practices.

The context of the natural function and cultural form in 'the closed'

The relation of morality and religion to the social and individual levels of biological organisation is a central aspect of Bergson's project in *The Two Sources of Morality and Religion*. What, then, is the place of the biological organisation of the human in this text? It is related to a number of issues. We have seen how there is an independence of cultural evolution from nature, and that it develops contingently in ways that bear no resemblance to the biological functions that underlie them. First of all, then, the account of morality and religion will involve the discovery, beneath the form they take, of the function they perform (this is Bergson's claim that morality and religion are not a matter for the moralist and the theologian only, but demand a biological treatment). Second, insofar as they reflect essential functions, both arise from a tension between the social and individual levels of biological organisation; more specifically from the tension that arises when the individual organises himself in

such a way as to depart from what society requires (this is Bergson's claim that the individual and society are not a matter for the psychologist and the sociologist only, but also demand a biological interpretation).[29] Third, the tension between the two sources of morality and religion – that is to say, the open and the closed as the two types of relation between society and individuality – that is the fundamental source of what Bergson calls 'complete' morality and religion is effaced by the intellect which transforms the real tension that we experience within ourselves, and which would suggest to us this double nature of each of us as social and individual, into an idea that is taken as a single transcendent and peremptory source of obligation (the 'good', 'law') and faith (God); when morality and religion are related to these ideas as their essence, if not their origin, they appear paradoxical and inexplicable (and here we find Bergson's method – it is not through reason that we will find the 'truth' of our ideas, for that 'truth' is nothing more than their genesis, and this can only be recovered by an intuition that would return to their sources and follow them in their growth). These, breifly, and without yet going into detail about morality and religion themselves, are the issues Bergson deals with on the closed source of morality and religion.

The 'closed' is a relation between the individual and society based on the preservation of order. This makes society the dominant characteristic, since individuality is the tendency that threatens to break up the order (on the side of the open, it participates in the continued evolution of that 'order', which as a result is only ever in a state of relative stablility). However, as we have seen, society cannot act directly; where it does, in the ants, the result is a single level of organisation, a single organism, that is better compared to an individual than a society. It is only with the emergence of indeterminate individuals that society arises, as if the one level of organisation automatically calls up the other. Yet society remains virtual, articulating individuals just enough to keep them social – what this means at a cultural level is contingent upon their freedom. Without, then, looking at the tendency towards the open, let us return to the question of the cultural evolution of society, and examine the functions of (closed) morality and religion, and the forms they take.

Morality and Religion as Functions of Biological Organisation

We began this chapter by looking at Bergson's account of the persistence of social organisation at a biological level in the species characterised by individuality, and established that while it determines us to live in society, it leaves the actual form of society contingent upon the actions of free individuals, resulting in a cultural evolution that cannot be reduced to a biological cause. The final point we reached was the examination of the analogy Bergson uses between the ant-hill and the human society, and we came to the conclusion that it is only when it remains virtual, in a species characterised by individuality, that society *can* exist in a real, and not a merely metaphorical, sense. We could say that there is a kind of exchange between them: individuality keeps society in a state of virtuality at the natural level, but society actualises itself through individuality at the cultural level. Let us now see what natural functions morality and religion serve, and what cultural forms they take.

Bergson re-traces the evolution of morality and religion by separating the two dynamics, open and closed, that the intellect effaces. It is on the side of the closed, the the tendency of the social and the individual to condition each other in approximation to the static ideal we saw realised in the ant-hill, that he identifies certain natural functions that, over successive generations who contribute to the ideas they inherit, give rise to the current cultural forms of morality and religion. Using this method, Bergson seeks to discern the real genesis of morality and religion from their static representation on what he calls 'the intellectual plane'. We will leave it until the next chapter and the conclusion to look at his account of how true knowledge is continued in an action that goes forward, and how individuals participate in both natural and cultural evolution, opening up a perpetual re-creation of morality and religion beyond their current forms, and thus to some extent resisting the tendency of society and individuality to enclose each other in a fixed state.

To a certain extent, morality and religion *are* the closed society for Bergson, they are the forms taken by the resistance that social organisation puts up when the indeterminate action of the individual threatens to depart from what society requires. They are, so to speak, social organisation made tangible in the face of individual self-organisation: "this religion, which we have called static,

and this obligation, which is tantamount to a pressure, are the very substance of the closed society" (TSMR 229-30; O 1202). We must be clear about this: morality and religion are not the substance of society itself, but of the *closed* society. What is the significance of the word 'closed' here? We have seen in the ant an actual closed society – it amounted to nothing more than an organism, and was only metaphorically social, if at all. But if moral obligation and religious belief are the substance of what Bergson calls 'the closed society' in humans, then the closed society is rife with tendencies and counter tendencies and all the tensions that arise between them; it is a society striving to keep itself together, and in this respect it is nothing like the smooth functioning ant-hill.[30] If there is a comparison to be made, it is between the real organisation of the ant-hill and the ideal limit that the 'closed society' tends towards. Thus, in speaking of 'closed justice' during his discussion of law, Bergson describes it as "*relatively* stable justice" (TSMR 64; O 1043, my italics).

When speaking of a closed society, then, Bergson is not naming a *type* of society but a *tendency* of social organisation (it may have been better to call it the *closing action of* society). Hence, Bergson's description of moral obligation as a resistance to the resistance that individuality presents to social organisation (TSMR 11; O 991). If morality and religion are the substance of this *closing action*, they indicate first the fact that a *tension* arises within humanity between the two levels of organisation, for they are the two mechanisms by which it is resolved. It is as if social organisation were elastic enough to allow for the existence of free individuals, but strong enough to pull against them if their action departs too far from its own. The essential fact is that the freedom *of* individuals to organise themselves does not imply freedom *from* the social organisation that continues to articulate them *en masse*, ensuring the cohesion of the group "by bending all individual wills to the same end" (TSMR 229; O 1202). It is as if by merely existing, individuality calls up a social force that inhibits it: "obligation is in no sense a unique fact, incommensurable with others" (TSMR 11; O 991). There is an essentially double nature of the human, which cannot be self-directing without being inhibited by the broader living systems of which it is a part: "each of us belongs as much to society as to himself" (TSMR 6; O 986).

Does this mean that consciousness itself is constituted *between* these two

levels of organisation? That it cannot be individual without also being social? As we will see in the next chapter, Bergson had always associated consciousness with freedom, and unconsciousness with habit and automatism; it had never been a constant for him, but varied in tension according to our power of action or power of choice, what he called in *Matter and Memory* the 'zone of indetermination' that surrounds our actions (see MM, chapter one). In the context of a single life, Bergson certainly speaks as if consciousness only arises in the moments when the two sides of our nature pull in different directions:

> Every instant we have to choose, and we naturally decide on what is in keeping with the rule. We are hardly conscious of this; there is no effort. A road has been marked out by society; it lies open before us, and we follow it; it would take more initiative to cut across country. Duty, in this sense, is almost always done automatically; and obedience to duty, if we restrict ourselves to the most usual case, might be defined as a form of non-exertion, passive acquiescence. How comes it, then, that on the contrary this obedience appears as a state of strain, and duty itself as something harsh and unbending? Obviously because there occur cases where obedience implies an overcoming of self. These cases are exceptions; but we notice them because they are accompanied by acute consciousness, as happens with all forms of hesitation; *in fact consciousness is this hesitation itself* for an action which is started automatically passes almost unperceived. (TSMR 10; O 990, my italics)

One of the innovations Bergson makes in the study of morality in *The Two Sources of Morality and Religion* is his location of the relation between the individual and society *within* consciousness. Whether it is obligation or aspiration, morality is never a force, social or otherwise, that inhibits the individual from the outside. Society is found within consciousness or not at all: "were there not some part of it in us, it would have no hold on us" (TSMR 6; O 987). Bergson's examples from literature – Daniel Defoe's Robinson Crusoe and Rudyard Kipling's 'forest officer' – emphasise that even in cases where an individual is isolated from all other individuals, 'society' is still there inside them (TSMR 6-7; O 987-8). Conversely, he describes 'moral distress' as a state of alienation that exists within an individual who remains in a social context, but for whatever reason is not fulfilling the role that society expects of them. In Bergson's terms, then, isolation is not to be found on a desert island, but within

the self, when "the relation between the social and the individual self" – a relation intrinsic to consciousness – has been thrown out of gear (TSMR 8; O 988). Bergson uses the moral example of the criminal, whose 'secret' alienates him from his 'social self' even if no-one else on earth knows his crime; we could just as well take an example that would fit the different kind of correction that Bergson says the religious function performs, that of preserving society against the insecurity or fallibility of individuals, and say that someone who fails badly in their responsibility to society would feel a similar alienation in the face of their shortcomings (shame perhaps, rather than guilt). Is consciousness essentially moral distress, then? Are we bound, by being individual, to disappoint society's ant-hill ideal and to feel this disappointment within ourselves? Of course, Bergson describes a very different social experience when he characterises participation in the creation of the open society as 'joyful', but we are dealing here with the preservative action of society to close around us; is distress *essential* in this case, or are these examples we have considered mere *accidents*? Can one even *be* individual without feeling social pressure? To emphasise that this tension within consciousness itself between society and individuality is neither a pathological, nor even a merely psychological issue, but pertains to the very essence of consciousness, we might recall the very first sentence of *The Two Sources of Morality and Religion* (along with a statement from the beginning of chapter two, which refers to religion rather than morality):

> The remembrance of forbidden fruit is the earliest thing in the memory of each of us, as it is in that of mankind. (TSMR 1; O 981)
>
> We find in the past, we could find today, human societies with neither science, nor art, nor philosophy. But there has never been a society without religion. (TSMR 83; O 1061)

This first sentence is a remarkable statement! A prohibition, an inhibition, is as old as memory itself, and by extension as old as consciousness itself. The conclusion is unavoidable: there has never been consciousness without prohibition (and in relation to the second statement, taking into account the function that Bergson goes on to ascribe to religion, we may add that there has never been consciousness without insecurity). But is this so remarkable from the thinker who placed the relation between society and individuality *inside*

consciousness, and characterised consciousness by the very divergence of the one from the other? While in the life of an individual, then, morality is a "tranquil state akin to inclination" (TSMR 11; O 991) and duty is "almost always done automatically; and obedience to duty […] might be defined as a form of non-exertion, passive acquiescence" (TSMR 10; O 990), it does arise out of, and in a certain sense measure, a state of tension: it grows in proportion as the individual's action departs from that which society requires.[31] And if, for Bergson, religion addresses the same problematic departure, albeit arising from the weakness rather than the egoism of the individual, are we to assume that it too, or the fabulative function that underlies it, is as old as memory, essential to consciousness? How else could Bergson say that it is as old as society?[32] For society, as we have seen, is as old as individuality if human consciousness is virtual instinct as well as actual intellect. Let us conclude, then, that for Bergson, morality and religion arise out of – we could go so far as to say *are manifestations of* – the tension that is created when the individual departs from, and thereby calls up, the virtual society. It is in the space of contingency created by this tension, where we have already seen consciousness arise, that culture will evolve. Before looking at the contingent cultural forms that morality and religion take, let us see how Bergson identifies the biological function they perform.

In our discussion of ecological instincts in chapter one, we saw how inexplicable the action of certain creatures is if it is not referred to the broad living systems that include and articulate what appear to us to be discrete and independent beings. It seemed there must be some miraculous knowledge on the part of the individuals concerned. Likewise, in humans, the real social organisation that the intellect effaces from our experience of things, and that Bergson is concerned to recover, gives rise not to knowledge but to beliefs and practices that are simply absurd if related to individuals alone, or even to a group of individuals if taken as a discrete multiplicity. Thus we have Bergson's formulation of the central problem of religion: *why are rational beings the only beings to pin their existence to an irrational rather than a rational cause?* And we could express the problem of morality in similar terms (although Bergson never sums it up as neatly as he does with religion): *why are free beings the only beings to act according to someone else's will rather than their own?*

> Why did we obey? The question hardly occurred to us. We had formed the habit of deferring. (TSMR 1; O 981)

Both these paradoxes highlight the impossibility of accounting for obligation or religious belief with reference to individuals alone. For Bergson, they mark a deficit in the human society of the efficient order that is found in the ant-hill. Whether it is due to an excess of confidence in individuality that leads one to strike out on their own, and morality steps in, or whether it is a lack of confidence in another that leads them to let the community down, and religion steps in, in either case, it is the social organisation directing the individual in the image of the perfect citizen, the ant! It is as if consciousness, which appears when the smooth functioning of society and individuality drifts off track, in order to guide it back, in doing so desires its own dissolution; as if the ideal of consciousness (*qua* the closed soul in the closed society) effectively amounts to unconsciousness, or at least torpor.

Thus, Bergson's method in *The Two Sources of Morality and Religion* does not involve the relation of a particular social fact to a particular biological need, but rather the discerning, within a particular fact, of how it is to be related to a biological need, and how it remains contingent upon the freedom of individuals:

> Working back step by step we should get back to an original closed society, the general plan of which fitted the pattern of our species as the ant-heap fits the ant, but with this difference that in the second case it is the actual detail of the social organisation which is given in advance, whereas in the other there exists only the main outline, a few directions, just enough natural prefiguration to provide immediately for the individual a suitable social environment. (TSMR 234; O 1206)

However, while it is possible in principle to uncover the original nature of morality and religion, it is difficult in practice to do this due to the fact that the form they take has been overlayed by a cultural evolution, resulting in forms that in many cases no longer resemble the functions that gave rise to them. For Bergson, it is the focus on contemporary forms of morality and religion, and particularly on the claims that are made in their names, that has prevented philosophy from discovering their real causes. Even Bergson acknowledges that

there is no "automatically applicable method of research" and that "we have to grope our way tentatively" when in search of these sources (TSMR 236-7; O 1208).[33] Let us see what form this initial 'prefiguration' of society took, and observe its differentiation into two specific functions; for morality and religion too are tendencies, differentiated within an original *custom*, the earliest form of the closing action of society that Bergson identifies: "originally the whole of morality is custom; and as religion forbids any departure from custom, morality is coextensive with religion" (TSMR 102; O 1079).

Whether considered separately in their most highly evolved forms, or taken together at their origin, undifferentiated in a single 'custom', for Bergson the essence of morality and religion is "a defensive reaction of nature against intelligence" (TSMR 102; O 1079). We have already noted the specialization each will follow, deriving from the two sides of this danger: individuals can willingly or unwillingly act to the detriment of society, but what does the closing action of society in response to a wayward individual look like in its most rudimentary state? Bergson describes the primitive custom as a mixture of elements that will develop clarity as the evolution of morality and religion separate them out; originally there is little distinction between correction and support, punishment and misfortune, and even the individual and the group, in the way that custom maintains order:

> The solidarity between the members of the group is such at first that all are bound to feel that they share to some degree in the lapse of any single one, at least in such cases as they consider serious: moral evil, if we can use the term at this stage, is regarded much the same as a physical evil spreading from one person to another, until it contaminates the whole society. So that, if an avenging power does arise, it will be to castigate society as a whole, without making its weight felt only at the spot from which the evil sprang. (TSMR 102-3; O 1080)

Let us follow the evolution of the two tendencies, morality and religion, out of this original custom. As with other tendencies, Bergson provides a 'dynamic' definition of them: it is not the possession but the emphasis of a characteristic that distinguishes them. Thus, on both lines, he identifies something supportive as well as corrective, while characterizing each by one of these. Morality, which primarily corrects the individual by prohibiting, also provides solidarity between

individuals (TSMR 6; O 986-7). Religion, which primarily corrects the individual by encouraging, also bolsters human justice by referring it to divine justice (TSMR 4-5; O 984-5). In addition to their development of different tendencies, and quite apart from which of these characteristics they emphasise, we will have to take note of a difference in the way that each develops as well. We find in Bergson's treatment of them a very different attitude towards morality and religion. Morality is associated with 'civilisation', incorporating the latest ideas from other areas, constructing itself in the image of science and philosophy, and evolving 'vertically' away from custom (TSMR 106; O 1082). For example, Bergson ascribes the early evolution of the idea of justice to the mathematical concepts that presided over it (see TSMR 54-6; O 1033-5). Religion, on the other hand, remains closer to the 'primitive' – at one point Bergson compares it to a family who live in isolation and depend on their absurd routines to keep them going (TSMR 114-5; O 1091-2) – and Bergson describes its evolution as 'horizontal', complicating without advancing its original impulse, and even departing from it with often horrific consequences such as sacrifice (see TSMR 172-3; O 1092). In general, Bergson is more critical of the religion than he is of the morality of the closed society, although we should note that on the side of the open he values mysticism more highly than open morality, devoting a whole chapter to it, whereas his discussion of the 'moral hero' in his first chapter amounts to nothing – there is not a single example and he is soon replaced by the mystic, who is ushered in to replace him with no real introduction (see TSMR 23; O 1003). Even in his discussion of law and justice, it is with reference to the Bible that he describes the transition to the open (see TSMR 61-2; O 1039-40), and in his discussion of democracy he attributes its origins to a "religious basis" in Kant (pietism), Rousseau (Catholicism) and The American Declaration of Independence (Puritanism) (TSMR 243; O 1215). Let us now see how morality and religion evolve.

While particular moral obligations "have little by little emerged from the confused background of customs which we have found at the outset" (TSMR 175; O 1150-1), this process remains entirely contingent on a purely cultural evolution. Ideas that have no essential relation to custom become attached to morality and guide its development in a direction that is consistent with that of human knowledge in general: "the picture of Justice pursuing the criminal is

relatively modern, [implying] a relatively abstract representation of the activity of the individual, which is taken to be independent because it has been isolated from social activity" (TSMR 103 & 102; O 1080). It is the activity of the intellect, in areas quite apart from morality as well as in its explicit reflections upon it, that have guided the evolution of morality as much or more than the closing impulse of society itself (we could think of the close relation between social theory and metaphysics that we briefly noted in the introduction). Bergson expresses the fact that everything in morality is contingent except obligation itself in his own tautological categorical imperative: "you must because you must" (TSMR 15; O 995). If Bergson has no faith in such morality (not that he claims we could do without it: there must be society) it is because he is interested in participating in its evolution, not perfecting a static image of its current state that would then be imposed in a properly social effort to minimize if not put a stop to that evolution (we will see in the next chapter that one of the most effective media through which the closing action of society can work is the intellect of the men who draft its constitution). Indeed, if Bergson is ambivalent towards the closed morality, it is because it is the counter-evolutionary tendency of morality, yet for this reason it is also essential to the evolution of morality. It is never a matter of replacing the closed with the open in Bergson; rather, he demonstrates the importance of a critical awareness of its particular nature as one side of a dynamic process. What he does reject is the ideal of the closed morality as developed by philosophers, insofar as their attribution of morality to a single peremptory source effaces its evolution, and in doing so actively contributes to its closure (as we will see in the next chapter); but even here there is a positive role of moral ideas or representations, which are taken up and given a new significance by the 'moral hero' or reformer of morality.[34] To complete our account of what society is in Bergson's philosophy, it remains to consider the specific nature of cultural, as opposed to natural evolution.

The Actualisation of Society in Culture

In this section, I will address what we might consider to be an appendix to the main project of *The Two Sources of Morality and Religion*: Bergson's treatment

of the question "are things bound to follow their natural course" (TSMR 248; O 1219) in terms of its general implication that the cultural evolution of humanity can in some sense continue 'beyond nature'. In order to investigate in what sense, if at all, Bergson suggests a cultural evolution can develop beyond the conditions of natural evolution, I will return to the question of adaptation as a necessary but superficial aspect of an essentially creative evolution. However, what we will be concerned with here is adaptation in a cultural context, and whether there can be said to be a 'cultural selection' at work in a fundamentally creative evolution of consciousness, in the way that we saw natural selection at work on a fundamentally creative evolution of life in the last chapter. The question I will ask, then, is can we say, in much the same way that Bergson claims the *élan vital* as a "limited force" due to its material conditions, that the *émotion creatrice* of *The Two Sources of Morality and Religion* is a limited force due to its socio-historical conditions? In order to answer this we will first have to assess whether such a departure from nature is currently thought to be possible at all; and second, we will have to examine Bergson's account of the 'significance' of the human species as the only one that 'breaks free' of natural conditions and becomes truly 'creative'. Important points in this section can be summarised as:

- the degree of freedom that culture has from its natural conditions means that it can develop in the direction of an indeterminate cultural evolution, thus establishing a difference in kind between the natural (closed) circle in which the individual and society are adapted to each other, and the continued (open) evolution in which individual and society enter into a creative dynamic
- cultural evolution proceeds through what Bergson calls a 'creative emotion' – an impetus of the will that is not determined by the contents of the intellect, but is not completely contingent either; it works *through* the materials that it inherits from its social milieu in order to transform them (much as life utilises matter to 'construct machines that overcome mechanism')
- Bergson's account of the significance of the human demands a new

> interpretation in the context of this creative emotion; the broader biological, and narrower cultural frames of reference for locating significance overcome the settling of significance on 'the human' by setting up a circuit of sympathy that opens out and deepens indefinitely

The absurdly profound question that we treat in this section will form a kind of conclusion to the examination of society itself. It will leave a lot of associated questions hanging, while we turn in the next chapter to examine the individual, whose consciousness, agency, freedom and very status as 'individual' will be thrown into question in light of the place we have accorded to society so far. At the end of that chapter, we will return to the question of the future of humanity in order to examine our role in it, and provide a broad outline and certain illustrations, in the conclusion, of an ethics of creative revolution.

Creative Emotion and Cultural Selection

One of the most striking conclusions of *The Two Sources of Morality and Religion* is that morality, religion, law and government are only the superficial causes of obligation, order and solidarity in society. This implies that an entirely different set of customs and laws would work just as well as long as they ensured the cohesion of the group. This does not mean Bergson is introducing relativism into our understanding of human culture (we have seen that social order is natural and necessary): he is introducing *evolution*. Just as natural evolution continues through species so cultural evolution continues through societies, but it cannot do so at the level of the society itself – this would lead to the actual unity and self-preservation of the ant-hill. Human society, as a virtual multiplicity, must evolve through the indetermination that arises from the mutual irreducibility of the action of the heterogeneous elements *and* the action of the whole. Thus, on the one hand, cultural evolution proceeds via the medium of certain privileged individuals because natural evolution stops at the species or the closed society "as if before a blank wall" (TSMR 236; O 1208). On the other hand, it continues through the culture that is produced in the exchange between social necessity and individual contingency in the evolution of forms or ideas.

As we will see, these are the medium through which the privileged individual participates in the evolution of culture as a whole. We will conclude our study of the evolution of society, then, by looking at the cultural material by which an individual can create himself beyond the options given by the closed society, and at the way society itself is both transformed by this creation and to some extent 'selective' of it. It will then remain to consider what constitutes the significance of humanity thus characterised for Bergson.

We have seen that for Bergson morality and religion are essential functions that evolve contingently into cultural forms that take on quite unrelated roles. In his examination of this process, Bergson continually warns against the intellectual analysis of culture, because it effaces the tension between the social and individual levels of organisation, and assumes the resulting ideas are self-sufficient and peremptory causes of the feelings which in fact gave rise to them: "the thing itself is thus mistaken for its expression or its symbol: this is the usual error of a sheer intellectualism" (TSMR 231; O 1204). To take morality as an example, whatever ultimate motive it settles on will be as arbitrary as it is conventional: "there is no principle of action from which it is not possible to deduce more or less the morality that is generally accepted" (TSMR 232; O 1204). Morality itself is left unexplained, as Bergson illustrates with reference to Plato's Idea of the Good – it does not remove the difficulty of knowing how to range actual events in relation to it, and if we did know how to thus range them, we would not need it.[35] Further, an intellectual principle of any kind offers no account of how it creates an imperative obligation: "the truth is that an ideal cannot become obligatory unless it is already active, in which case it is not the idea contained in it, but its action, which makes it obligatory" (TSMR 233; O 1205).

However, Bergson also attributes a doubly positive role to ideas in the evolution of culture. In the context of the closed society, it is through ideas that morality and religion can be debated, applied, refined and criticised. All of this is essential and must still go on: Bergson does not suggest that the discovery of, and participation in, the real evolution of the open society means that we can forget about the customs, law and order of the closed society. He simply corrects the intellectualist tendency to treat them as universal. In the context of the open society – or again, as we may say, *the opening action of society* – ideas play a

crucial role as the media that what he calls a 'creative emotion' takes up and transforms. I will examine the dynamics of this cultural evolution by comparison with those of natural evolution, in order to see how Bergson can again critique the hypothesis of universal mechanism (this time implied in the intellectualist treatment of morality, religion, law etc.) while preserving a role for actual mechanisms within a fundamentally creative cultural evolution. In order to make this comparison, let us look at a mechanistic account of cultural evolution.

When examining culture towards the end of his book *The Selfish Gene*, Richard Dawkins distanced himself from the reductionist sociobiological approach of explaining cultural facts with reference to some underlying biological cause, and developed instead a conception of cultural evolution by analogy with natural evolution (or at least with his conception of it). Dawkins coined the term 'meme' from the Greek μιμεσις in order to name a unit of cultural information, analogous to the gene as a unit of biological information, which is transmitted by *imitation* (Dawkins 1976: 192). His 'mimetics' shares the same conceptual bases as his genetics: mutation, variation, heredity and natural selection (or in this case *cultural* selection). It also shares the same implications. The individual as a 'cultural' or 'social' being is characterised by the same passivity in regard to memes as the organism, or "lumbering robots" that are mere vehicles for genes: "when you plant a fertile meme in my mind you literally parasitize my mind, turning it into a vehicle for the meme's propagation" (Dawkins 1976: 19 & 192). On this view, there is no such thing as a personality; the person is characterised as an automaton not with reference to its habits but with reference to its role in the evolution of culture: "all that is necessary is that the brain should be capable of imitation […] a cultural trait may have evolved the way it has simply because it is advantageous to itself" (Dawkins 1976: 198). The engine of cultural evolution is the inexplicable variation of the 'meme pool' through mutation on the one hand, and the preservation of beneficial adaptations through cultural selection on the other.[36]

This metaphorical use of an already deeply unconvincing genetic model to explain cultural evolution is shocking in its outdated mechanism.[37] However, it is useful for our purposes of considering Bergson's account of cultural evolution. As we will see, unlike Dawkins Bergson does not just reproduce exactly his evolutionism at a cultural level; there are important differences

between natural evolution and cultural evolution in Bergson, and we can see what they are by comparing the alternative he provides to 'mimetics' (and to the sociobiology we considered earlier) to the critique he developed of mechanistic biology. Hence the absurd identity of genetics and mimetics in Dawkins is useful in that it can provide a single background against which to set off the differences between natural evolution and cultural evolution in Bergson.

We saw in chapter one that an adaptation is an extrinsic relation, and as such it is not a cause of evolution, but an effect. If the organism were a discrete 'object' that undergoes random internal variations, and had to *fit itself to* an external environment, adaptation would indeed be the explanation of its form and functions. However, for Bergson, life is a virtual multiplicity, it evolves as a whole that dissociates the tendencies it contains along different lines, and as such an organism is *individuated within* its environment: what look like extrinsic relations are often the measure of the real discontinuity that life produces within itself as it evolves. The distinction between organism and environment is an effect of life's search for individuality: it is the intellect that takes this tendency to its ideal limit when it represents the environment as a container within which evolution takes place. In this sense, an adaptation is not *added to* but *differentiated within* an organism as it grows increasingly discontinuous with the nutrients that nevertheless remain essential to it. It is less a connection established, than a continuity disrupted. We also saw that once established as such, 'individuals' gain a certain freedom on the basis of this discontinuity, and that adaptation can become a cause of what Bergson called a 'superficial' evolution at this level – species may evolve physical, functional and behavioural characteristics that reflect sympathetic or antagonistic relations between them insofar as they have become effectively 'separate'.

In *The Two Sources of Morality and Religion* there is a similar critique of an intellectualist conception of culture in static terms, and a similar dynamic discovered between cultural evolution and what we may call 'social adaptation'. I will leave the consideration of the details of the latter concept – which can be derived from Bergson's account of "natural society" in chapter four of *The Two Sources of Morality and Religion* – until the conclusion, when we will look at the nature of social change by comparing what we might call a 'closed revolution' or transition from one state form to another that is already 'given' as possible in

terms of the first, with a 'creative revolution' or participation in the creation of social conditions that are not given in the current state form. The former concept, which will underlie it, that of cultural evolution, can be derived from the first chapter of the book, and implies at one and the same time a conception of culture (the totality of ideas) and of society (the totality of individuals) as a virtual multiplicity. As we saw in the case of biology, the different internal dynamics that distinguish an organism from an object ultimately depends on its relation to the external world – yet these are not the right words, for the organism is created within life by an evolutionary process of differentiation that produces the distinction between the internal and the external by the very act of individuating a living system within itself. So it is with culture, and its relation to creative emotion.

The natural evolution of society stops with the corrective action that mitigates the dangers of individuality, but there is a cultural evolution of society that continues beyond this point, and at its origin "there has always been a man" (TSMR 29; O 1009). The significance of this fact for Bergson lies in the creative emotion in which the man participates: "creation signifies above all emotion" (TSMR 33; O 1013). What is this new concept of emotion? Etymologically, an emotion signifies an outward radiating motion, a physical stirring or agitation of an individual, or a political or social stirring or agitation. Bergson's use of the term includes all of these senses, but there are two fundamental aspects of the concept that he also specifies: first, an emotion does not have an object: "it is, in relation to the intellectual states which are to supervene, a cause and not an effect" (TSMR 32; O 1011-2); and second, an emotion is not the possession of an individual: "it is supra-intellectual" (TSMR 32; O 1012). What is the significance of these two facts for our understanding of cultural evolution? The first establishes the priority of the creative emotion to the intellectual idea; it "vitalises the intellectual elements [with] a vivid and unique emotion" whereas the intellect merely "cold-hammers the materials, combining together ideas long since cast into words and which society supplies in a solid form" (TSMR 34; O 1014). The emotional creation, then, is not given in the existing ideas, but actualises through them an original morality that was virtually contained within it (TSMR 35; 1015).

This could be seen as a dangerous idea: the future of morality in the

hands of a few creative individuals. Should morality not be objective? The second characteristic of emotion mitigates this perceived danger by indicating the direction, if not the detail, of the evolution. What does "supra-intellectual" mean for Bergson? In *Creative Evolution* it had indicated a fringe of consciousness broader than the intellect – an evolutionary memory of a time when the mind was not canalised as it is today, but in *The Two Sources of Morality and Religion* it takes on a far more concrete meaning, (and far more serious implications for self-identity, as we will see in the next chapter), in the context of *virtual instinct* as a literally *sympathetic* aspect of human consciousness, inseparably bound in each of us to what we might call the 'antipathetic' intellect. The individual man, then, the mystic or moral hero, is first distinguished by the fact that his emotion "develops as an impetus in the realm of the will" rather than the intellect (TSMR 36; O 1016), and second by the fact that the will is not only broader than the intellect but for that very reason is also broader than the individual: "all aimed at opening what was closed" (TSMR 230; O 1203). However, and for this very reason, their content cannot be given in advance: "they defied all anticipation" (TSMR 230; O 1203), and it is only in retrospect that they appear as progressive approximations to an eventual outcome: "these successive efforts were not, strictly speaking, the progressive realisation of an ideal, since no idea, forged beforehand, could possibly represent a series of accretions, each of which, creating itself, created its own idea" (TSMR 230; O 1203).

Since the formulae of the existing morality are both "the residue" and the medium of this moral creation, the relation between the open and the closed in culture is not, then, straightforwardly one of cause to effect (TSMR 37; O 1016). The causality of the open is a causality of actualisation – the taking up in a new sense of the ideas contained in existing culture. It is not the causality of the closing action of society, which in its pursuit of the ideal of order would exclude any real creation. Indeed, in an incredible foreshadowing of contemporary thought, Bergson describes the relation between them as a feedback mechanism: the formulae are "an effect which exerts an inhibitive or regulating action on its causes" (TSMR 75; O 1053). Thus, while it is neither possible "to pass, by a mere process of enlargement or improvement, from the static to the dynamic" (TSMR 231; O 1203), nor is it desirable to try – for in Bergson's terms any attempt would have to be based on an intellectual engagement with the ideas

given in culture, and would be a mere rearrangement of the already known, a new form of the closed – there is nevertheless a causality of the closed upon the open that resembles that of matter upon life: creation is obliged to follow the contours of the already created. It is at this level, in culture as in nature, that there is a 'selection' at work; as Bergson says in reference to Emile Faguet's suggestion that the French Revolution happened not *for* liberty but *because* people were starving: "we must explain why it was, at a given time, that people refused to go on 'starving' (TSMR 244; O 1216). Recalling that in *Creative Evolution* Bergson was happy to allow that natural selection was one mechanism (among others) that explained the sinuosities of the path evolution had taken, it did not explain the movement itself, so we can say that this causality of the closed, in the form of a feedback that provides the conditions of further creation, effects a kind of 'cultural selection' upon the form a creative emotion can take: "just as the new moral aspiration takes shape by borrowing from the closed society its natural form, which is obligation, so dynamic religion is only propagated through images and symbols supplied by the myth-making function" (TSMR 231; O 1203). It is this adoption of already existing ideas by the creative emotion in order to express itself that makes evolution look like progress: "since they cannot communicate to the world at large the deepest elements of their spiritual condition, they transpose it superficially; they seek a translation of the dynamic into the static such as humanity may accept and stabilise by education" (TSMR 236; O 1206). As in nature, the forms that evolve creatively are selected and preserved because they work, producing the impression of an adaptation or design.

How is this cultural evolution, which is not a progress but just a persistent opening of what is always closing, to be evaluated? Bergson attributes its leaps forwards to mystics, and warns us that creative action cannot be engineered. What moral action should we take as individuals on the basis of this assessment? Do we limit ourselves to the maintenance of the closed society while waiting for a hero to take us all forward: "these privileged ones would fain draw humanity after them" (TSMR 236; O 1208)? Or is emotional creation something we can practice ourselves, if we make "just the extra effort required" (TSMR 278; O 1245)? I will look in chapter three at the agency and creative potential of the individual in regards to the open future, and in the conclusion at their practical

involvement in regards to social and natural evolution. For now, let us conclude our examination of society by looking at Bergson's account of the significance of humanity in terms of the re-emergence of the creative impulse of life in *Creative Evolution,* in light of the dynamics of cultural evolution we have examined from *The Two Sources of Morality and Religion.*

The Significance of the Human?

At the end of chapter three of *Creative Evolution* (which is essentially the end of the book as far as the engagement with evolution goes) Bergson includes a section on the significance of humanity as the species in which the *élan vital* succeeds in pushing its creative impulse through the conditions that matter imposes on it and creates, in the human brain and the indetermination of action that it measures, the conditions of new forms of creation that were impossible in the rest of the natural world. Following his account of the origin of life and matter as two tendencies of universal duration, characterised by the opposite thermodynamic characteristics, explosive and entropic, Bergson discusses what is accidental and what is essential in evolution. The essential is the explosive action of life and the resistance it meets from inert matter, resulting in the formula *life is a virtual multiplicity that matter actualises* (CE 166; O 714). Following from this multiplication within unity arises a general tendency of life towards individuation or 'creation by dissociation', the always incomplete nature of which means that life also tends towards association or 'adaptation' (CE 167; O 716). Following this, we are on the path to humanity: "essential also is the progress to reflexion" (CE 167; O 716). Consciousness, or what Bergson calls "supra-consciousness" lies at the very origin of life: "this consciousness, which is itself *a need of creation*, is made manifest to itself only where creation is possible" (CE 167; O 716). In this sense, human consciousness is essential, and reveals the significance of life as the journey from universal to psychological duration. It is only with the emergence of humanity that duration is itself again.

This is not, of course, to reintroduce teleology into evolution. Bergson is clear that "there has not, properly speaking, been any project or plan" (CE 170; O 720) and that "life takes directions without aiming at ends" (CE 67; O 582); and

as we have noted, the place he allows to contingency stretches as far as life taking a carbon based form and being concentrated in organisms (individuation is only 'essential' in the context of matter as constituted in our solar system). It is not with reference to our form – neither our physical form nor the form of our consciousness – but to our function that Bergson can claim the human is the "term", "end" and "ground" of evolution (CE 170; O 720). He characterises the whole evolution of life as an effort to overcome the conditions placed upon it by matter, and in every case except the human, life has been overwhelmed. In humanity, and in the nervous system specifically, life has succeeded in creating "a machine which should triumph over mechanism" and which man can use as he pleases (CE 169; O 720). We owe this freedom to our brain, language and culture, but these are only the external signs of an "internal superiority" (CE 170; O 720).

By today's standards these are not unusual claims. Stephen Jay Gould has emphasised the fact that contingency dominates human evolution in his book *Wonderful Life*: "wind back the tape of life to the early days of the Burgess Shale; let it play again from an identical starting point, and the chance becomes vanishingly small that anything like human intelligence would grace the replay" (Gould 1989: 14); and archaeological evidence supports – for the time being at least – Bergson's claim that the brain is an effect, rather than a cause, of freedom. Two and a half million years ago humans had the light jaws characteristic of language, ate cooked food and had technology (tools for making tools), but the brain developed in size only during the half-million years *after* these activities, suggesting that the development of the brain was a consequence rather than a condition of these characteristically human – that is to say *creative* – activities (see Monod 1997: 128-33 & Taylor 2010, *passim*). What this research does not support, however, is the quite startling direction that Bergson takes in the final pages; and his rhetorical celebration of humanity does not do the sophistication of his thought justice.

Bergson tells us that there is "a difference in kind, and not only of degree, which separates man from the rest of the animal world" (CE 170; O 720), and that "the organised world as a whole becomes the soil on which was to grow either man himself or a being who morally must resemble him" (CE 171; O 721). This free being, which Bergson says "we may call, as we will, man or superman"

(CE 171; O 721) is only contingently registered in the human *form*, but is nevertheless the essence of the human. Such is Bergson's infatuation with his superman that his description of the rest of the animal world lapses into empty rhetoric, ranging from the exploitative (animals are "useful travelling companions"), to the resentful (animals are "cumbersome baggage" that humanity had to "unload"), to the demonising (animals are "hostile" towards humans); this latter comment is particularly ironic since it is clearly Bergson who, by saying it, is being hostile towards the animals (CE 171; O 721). Now, let us be clear: the point in lingering over this is not to criticise Bergson for expressing a no doubt accidental prejudice in some admittedly superficial passages. Rather, it is to highlight the incredible shift that occurs between this text and *The Two Sources of Morality and Religion*. Indeed, on certain points – and this is one of them – we can see in *Creative Evolution* the strain of the transition from the self-centred freedom that characterises the deep self of *Time and Free Will* to the all-encompassing love that characterises the open soul of *The Two Sources of Morality and Religion*. We will examine this transition in detail in the next chapter. In *Creative Evolution*, however, we are, according to Bergson, "right to attribute to man a privileged place in nature" (CE 172; O 723) *because he has a soul* and thus "dominates nature" and "bestrides animality" (CE 173; O 724-5) at the forefront of life's drive through matter. When Bergson describes these souls as "nothing else than the little rills into which the great river of life divides itself, flowing through the body of humanity" (CE 173; O 723), has he forgotten that this 'great river' flows through all living things? That it is the organisation at work in every living system, and that they are, first and foremost, defined by their differentiation *within life* (creative evolution by dissociation) rather than *out of each other* (adaptive evolution by association)? Nothing could be further from the spirit of Bergson's philosophy than these thoughtless comments. Even Darwin, in *The Descent of Man*, felt the need to clarify his use of the potentially hierarchical term 'descent' in the title, which referred simply to the fact of man's evolution or 'descent with modification' and involved no evaluative connotations, pointing out that it is inappropriate to use evaluative terms such as higher and lower in a biological context.

In order to demonstrate that Bergson's rhetorical celebration of 'man' is by no means adequate to the sophistication of his account of creative evolution, I

want to show that it *is* appropriate to Pierre Teilhard de Chardin's deeply problematic 'science of man' or 'anthropogenesis' as set out in his 1956 text *Man's Place in Nature*. Both thinkers are concerned with the *ascent* of man to a unique position in the universe, yet they differ on almost every point of how they account for this. – While Bergson holds life and matter to be dissociated tendencies within a unity that always potentially included them, Teilhard de Chardin's 'biosphere' describes new properties that emerge from matter when it reaches a certain level of complexity. Bergson's view of life is holistic, and consciousness is co-extensive with it, again taking on the distinct form of intellect by dissociation from instinct. For Teilhard de Chardin, on the other hand, discrete phyla are the elementary units of life (creationism?), and the 'noosphere' inexplicably appears on the one leading to man as a greater 'intensity' of psychism that alone constitutes thought. This leads him to characterise the evolution of all other species in terms of descent, while the evolution of man alone is described as an ascent. With a view of nature such as Teilhard de Chardin's, perhaps, we might expect sympathy to remain within a small family circle, but not with a view like Bergson's, for whom consciousness is co-extensive with life *in principle*.

Before seeing how *The Two Sources of Morality and Religion* allows us to re-interpret the significance of humanity in Bergson's universe, let us note what happens in the meantime. In his essay "Life and Consciousness" of 1911, Bergson introduces some of the themes of *The Two Sources of Morality and Religion* in the context of a discussion of the very same question of significance. He approaches it in the same way in this essay as he had in *Creative Evolution*, describing life in terms of thermodynamics, and consciousness as a canalisation of a property that is present in principle in all living things; it is via the resulting discussion of the nervous system that he arrives at the question of human significance. There are, however, a series of notable changes. First, while the structure remains the same – "automatism and repetition […] prevail everywhere except in man" (ME 24; O 835) – there is a remarkable change in tone, introducing the notion of love that will become so important in *The Two Sources of Morality and Religion* – "the force which animates [nature] seems to create lovingly" (ME 23; O 833). Second, it is no longer "man" but "the best of mankind" who are significant, and who Bergson describes as "the moral man"

(ME 24; O 833). Attached to this notion are two others: first, that of "heroism" defined as an action which is "capable of intensifying the action of other men" and which opens "new paths to virtue" (ME 24; O 834); and second, that of "joy" as the sign by which we know that "our destination is attained" and the creative principle has come into its own again in us (ME 22; O 832). Recalling Bergson's passing comment – perplexing comment! – when speaking of universal duration in *Creative Evolution* that "God, thus defined, has nothing of the already made; He is unceasing life, action, freedom" (CE 160; O 706), we find it complemented in "Life and Consciousness" when he says that the joy we feel when that duration creates again through our own is "the joy of a god" (ME 23; O 833). His use of upper case for 'God' and lower case for 'a god' is significant here: in 1920 in the essay "The Possible and the Real" he will describe us as "masers associated with a greater Master" (CM 105-6; O 1345), in both cases with reference to "the creation of self by self" (CM 106; O 1345) or "the art of living" (ME 23; O 833). It marks the introduction of a concept of participation that marks a shift in attitude towards society and nature that I will set out in the next chapter.

So, what happens in *The Two Sources of Morality and Religion* to affect our interpretation of Bergson's opinion? The most important change is Bergson's introduction of the concept of the open. Rather than a soul capable of intuiting its own creativity, we have a soul capable of opening out to society and to nature. If it were to stop within itself, or even within humanity, it would not be open:

> The other attitude is that of the open soul. What, in that case, is allowed in? Suppose we say that it embraces all humanity: we should not be going too far, we should hardly be going far enough, since its love may extend to animals, to plants, to all nature. (TSMR 27; O 1006-7)

The sympathy of the open soul participates in the life of all the living systems that include it. Its relation to all other living systems is characterised as love rather than domination or even superiority. However, it is no longer the human of *Creative Evolution* that is celebrated for the 'soul' that marks him out as superior. Rather, as we saw foreshadowed in the 'moral hero' of "Life and Consciousness", it is a small number of humanity that are celebrated for the 'open soul' that does not so much mark him out as re-introduce him into a world

where he is no longer characterised as superior but as participant. As we will see in the next chapter, creativity is not the creation of the self alone, but the creation of the world in which all life evolves. Is it, then, a minority of humanity who are significant in *The Two Sources of Morality and Religion*? The answer is reflected in the tone and movement of the whole book: the narrowing of the 'honour' to a few of the human species is only a step towards the sharing of it among all species. There are no grounds for attributing significance at the level of the human in *The Two Sources of Morality and Religion*, just as there are no biological grounds for discriminating on the basis of species (any more than there are for discriminating on the basis of race). In terms of Bergson's philosophy we would either have to take the actual exercise of creative consciousness as our frame of reference, and on this basis we would be forced to exclude most of humanity as 'cumbersome baggage' (how many times in all his books does Bergson remind us that automatism and repetition are everywhere in the *human* world?); or, if we do not wish to exclude most of humanity – and to do so would indeed run counter to Bergson's whole philosophy – then we would have to take not the actual exercise of creative consciousness but the potential to exercise it as our frame of reference, and on this basis we would be forced to include all of the animal world – perhaps, as Bergson says, all of nature – as co-participants in creative evolution, for consciousness is everywhere in life *in principle*. But why would we be 'forced to' include all life? Here is the strange paradox of human significance in Bergson's philosophy. The significance of the few humans capable of love is revealed only when they reveal the significance of all life. Significance, it seems, will oscillate back and forth between the one whose action is a creative participation in society and in nature, and the evolution of society and of nature that are revealed to be significant in and through that participation. It will leap from the mystic to all life and back again, but it will not by any criteria settle at the level of one species.

Thus, with Bergson's social thought we find ourselves very far from any conception of society as a mere collection of individuals. Society is as real as, and inseparable from, individuality. They are two sides of a single reality – a virtual multiplicity – in which society and individuality are to be understood as

real unity and multiplicity. We have seen the inadequacy, at both a natural and a cultural level, of a conception of society as an abstract or mathematical multiplicity: its own action (if it is held to have any) and much of the action of the individuals it 'contains' is rendered inexplicable. It is only with reference to a real unity – a real and efficacious organisation of society that is immanent in the individuals that it articulates – that individuality itself can be adequately represented. It is time to consider the consequences of what we might call this 'external continuity' or 'extension' of individuality in more detail. Bergson's initial work on individual consciousness and freedom in *Time and Free Will* and *Matter and Memory* was and remains exceptional for problematising the self-identity of consciousness *over time*, and in the latter text re-posing traditional problems regarding the continuity of the person in terms that were consistent with the very latest developments in the science of matter. However, it is only with the full working out of his social thought in *The Two Sources of Morality and Religion* that his account of individuality can be completed, for it is here that the self-identity of a multiplicity of consciousnesses is treated to the same rigorous re-evaluation. Indeed, it seems remarkable that for most of its history philosophy overlooked so simple a fact that there is not and never has been any such thing as human consciousness: there has only ever been human consciousnes*ses*. To my knowledge Bergson was the first, and perhaps remains the only thinker to take this plurality in its most concrete sense – as a virtual and not a merely numerical multiplicity – and to give over half of consciousness to society itself, as a common and literally sympathetic reality in which the individual consciousness participates. Let us look now at what this re-contextualised individual looks like, and how the individual freedom of Bergson's early work can be reconciled with his later social thought.

Chapter Three – Re-assessing Individuality

Bergson's philosophy – like much modern biology – established that what we are, and perhaps more importantly what we can be, is not given by nature; but the nature of our creativity or indetermination has yet to be worked out with any precision. It is here that Bergson's social thought can make a major contribution to the understanding of his philosophy in general. Our action may not be determined, but nor is it entirely unconditioned, and in this chapter we will examine the difference between the abstract conception of individual freedom most commonly ascribed to Bergson on the basis of his early work, and his later understanding of individual freedom in more concrete terms, as a participation in natural and cultural evolution. We have seen that society and individuality evolve culturally as well as biologically, and that while, at the biological level, we cannot have any idea of the direction in which we are tending, of the mutations in which we, at a genetic level, are participating, we can consciously participate in the evolution of ourselves and our world at a cultural level, and we can do so in such a way as to enjoy some degree of emancipation from the 'authority, hierarchy, and immobility' (TSMR 244; O 1215) that the biological organisation of ourselves and society would impose on us. In this chapter I will examine the status of the individual within this real evolution of society.

This chapter will consider one central theme from a number of angles: the experience of the 'deep self' that Bergson described in *Time and Free Will* is revealed, by the time of *The Two Sources of Morality and Religion*, to open out into an experience of what we might call 'deep ecology'. Why? Because it is only at the intellectual level – the level that constitutes nature as a set of spatially discrete objects, and human nature as a discrete subjectivity stranded among them – that the distinction of inside and outside holds good. As we saw in chapter one, the internal dynamics that distinguish a living system from a material object have as their profound cause their dissociation within a broader system, which is itself one and multiple like the organism it embraces. The same is true of consciousness: if 'inner' duration is a virtual multiplicity that is because the body, life, and ultimately the universe is a virtual multiplicity also, and to discover the depths of the self is to discover the 'outer' duration that has no

respect for such boundaries, having created them and continued to create through them. From *Time and Free Will* to *The Two Sources of Morality and Religion* there is a transition from the freedom of the individual *from* conditions to the freedom of the individual to participate in the *creation of* conditions (perhaps we should say, the creation of the conditions of further creation, if we are to give an adequate impression of the *indefinite* nature of the open future). From this point on, we cannot remind ourselves of the following statement often enough:

> The future must lie open to all sorts of progress, and especially to the creation of new conditions. (TSMR 243; O 1215)

We have seen in relation to biology, and will see again in this chapter in relation to psychology, that Bergson is not a reactionary thinker, who in criticising determinism immediately affirms total liberty as its opposite. To do so would be to reduce creativity and freedom to some abstract unconditioned activity that springs out of nowhere (out of an abstract Virtual). An incredibly important point, too often overlooked, is that a key aspect of Bergson's rejection of abstract determinism is his preservation of real determinations. It is through the study of these determinations, or 'articulations of the real' as he more usually calls them, that *precision* can be brought to creative action (understood as participation in community and nature rather than reactionary individualism). In order to escape the already known it is not necessary that our leap into the future be a completely blind one. We can, quite literally in Bergson's terms, *intuit* our way.

In re-assessing Bergson's account of individuality in the context of his social thought, I will set out a certain view of his philosophy as a whole, and develop it (both in this chapter and on into the conclusion) in a very different direction to that which currently occupies centre place in Bergson scholarship following Deleuze's re-interpretation of Bergson in terms of methodology, ontology and individual freedom. I will emphasise practice and ethics over methodology and metaphysics, cosmogony over ontology, and participation in community and in nature over individualism. Above all, I will emphasise that freedom is not merely an abstract (*individual*) or theoretical (*contemplative*) matter. It is not merely an academic topic. In Bergson freedom is communal rather than individual, emotional rather than intellectual, and it is characterised above all by participation in natural and cultural evolution. If a rather bland and

conservative notion of 'creativity' has come to characterise freedom in current assessments of Bergson's philosophy, perhaps there is something to be said for the fact that it is academics who come up with such definitions; it is freedom considered in the abstract rather than worked out in practice, and we may wonder whether Bergson's shift towards a greater emphasis on the concrete conditions through which creativity must act, yet which it can also transform or re-create, in part resulted from his diplomatic work during World War One and in setting up the International Commission for Intellectual Co-operation shortly after. At the very least these practices would have heightened his awareness of the real conditions that creative political action must deal with.

Such a suggestion must necessarily remain highly speculative, but there is a serious point to be made here, because neither a purely contemplative, nor a purely individual freedom can ever, on Bergson's view, achieve the complete and active freedom that he describes through the example of Christian mysticism in *The Two Sources of Morality and Religion*. For example, Bergson concludes his 1920 essay "The Possible and the Real" with this warning:

> In this speculation on the possible and the real, let us guard against seeing a simple game. It can be a preparation for the art of living. (CM 106; O 1345)

In this chapter I will re-examine certain key aspects of individual consciousness and freedom as described in *Time and Free Will* in light of the account of society we have traced so far, noting on each point a shift in emphasis: first, from two conscious multiplicities to two social multiplicities (that is to say, two relations *between* the individual and society – the open and the closed – which suggest a conceptual shift away from a 'pure' and towards an 'articulated' freedom); second, a shift from an epistemological to an existential engagement with consciousness (which reveals – in much the same way that Bergson claims that the notion of freedom as a mere choice not only misrepresents but actually limits our freedom – that the notion of freedom as merely individual actually inhibits our ability to participate in the open society, taking part instead in the totality of mutual determinations that characterise the hierarchy and immobility of the closed); and third, a shift from an internal emphasis on the 'deep self' to an external emphasis on what I will call 'deep ecology'. Overall, these three

moments suggest an evolution of Bergson's thought as a whole from the theoretical engagement with individual consciousness that characterised *Time and Free Will* to the ethical engagement with social action that characterised *The Two Sources of Morality and Religion* (and which, in my view, must by its own logic be extended to nature). I will characterise the freedom of the individual in Bergson as that which opens out onto a participation in the creation of the self, of society, and of nature. As we will see, there is an abstract freedom as *contemplation* that fails to open out to society or nature and remains individual, as opposed to a real freedom as *participation* that opens out into action. It is the abstract freedom that has been wrongly attributed to Bergson and unthinkingly celebrated by commentators such as Deleuze, just as it has been criticised by others such as Bachelard, for its lack of sense and distance from practical issues.

The Two *Social* Multiplicities

In *Time and Free Will* Bergson approached the question of individual consciousness and freedom in a number of ways, some of which take up the same concepts in very different senses, as we will see. However, one above all grasped the imagination of philosophers and has dominated Bergson studies in a way that does not do justice to the variety of approaches he employed: I refer to 'the two multiplicities' – continuous and discrete. The emphasis on these clear cut concepts – the most abstract concepts in the book, worked out in relation to problems in mathematics and ancient rationalist philosophy rather than evidence from either psychology or immediate experience – has resulted in a certain homogenisation of Bergson's thought, overdetermining an understanding of the many pairs of concepts he uses (heterogeneity and homogeneity, quality and quantity, duration and space) and resulting in a starkly dualistic reading of this text; a reading that is disastrous for his social thought. The greatest problem of the two multiplicities is the way they erect an absolute barrier between the inside and outside of consciousness (something that many of the other pairs of concepts in this text either de-emphasise (quality and quantity) or actually contradict (duration and space). In order to bring Bergson's early engagement with consciousness and freedom within the view of his philosophy we have gained by

looking at his social thought, we will have to separate out the different ways in which he approaches the problem, and recover the original diversity of *Time and Free Will* from those interpretations that have reduced it to its most simplistic conceptual aspects.

We will find that when the two multiplicities are to be applied to society, that is to say, when a collectivity of individuals are understood as continuous or interpenetrating, their freedom or agency can no longer be atrributed to them alone, in much the same way as when the collectivity of mental states are understood as continuous, freedom is found not in the action of a single state but in the organisation of the whole of consciousness. It will then remain to relate the whole of consciousness (itself a discrete entity in *Time and Free Will*) to the whole of society in which it is indistinct. It is this relation that we indicate when we refer to two *social* multiplicities. In what should by now be a familiar formulation, the recognition of society as an active holistic reality does not involve the rejection of its 'parts', individuals, as active holistic realities in their own right. On the contrary, it is only by recognising the real activity of the whole that we can recognise the real activity of the parts within it. Hence, while the two multiplicities of *Time and Free Will* inadvertently rendered society an abstract whole by maintaining a strict internality of consciousness and freedom within each individual, the two social multiplicities of *The Two Sources of Morality and Religion* not only retains but actually clarifies the nature of individual freedom by replacing it in the social life that is its true context. Thus we are not swapping individuality for society, we are swapping *mere* – and therefore *abstract* – individuality for a concrete relation between society *and* individuality. In the next two sections I will follow the implications of this shift for the 'deep self' (which we will see opening out towards what I will call 'deep ecology') and for freedom (which we will see in context as a participation in social and natural evolution). For now, the important points in this section are:

- the account of consciousness and freedom found in *Time and Free Will* is ambiguous; on some readings, such as Deleuze's, it would tend to distract from, if not exclude, an understanding of Bergson's social thought;
- our understanding of 'the two multiplicities' will affect how the book can

be situated in a holistic understanding of all Bergson's works and importantly how it can be reconciled with the reality and efficacy of society that is fully revealed in *The Two Sources of Morality and Religion*

- the two multiplicities of consciousness have to be understood in the context of the project of the book on the one hand, and in the context of the two social multiplicities that Bergson develops much later on the other

There is a general movement of Bergson's thought from the characterisation of duration and freedom as a deep internal aspect of the individual consciousness, to their characterisation as a participation in broader social and ecological processes that, themselves enduring in their fashion, do not recognise the inside-outside distinction, nor indeed the discrete nature of the individual. Let us examine these issues in Bergson's work on individual freedom.

From the Two Multiplicities to the Two Social Multiplicities

Bergson's project in *Time and Free Will* is to ascertain the mode of organisation proper to consciousness and work out its implications for individual freedom. His view is that the discussion between determinists and libertarians has been conducted with reference to an inadequate conception of consciousness drawn from the physical sciences, which he tackles on two fronts.[38] – First (in chapter one), he examines the principle underlying the still relatively new science of psychology: that the intensity of a psychic state can be measured.[39] Bergson's primary reference points, Gustav Theodore Fechner and Wilhelm Wundt, first established and were both committed to this principle.[40] The aim of this science, known as 'psychophysics' because of its application to the mind of methods drawn from the physical sciences, was to discover mathematical laws of consciousness by exposing subjects to the controlled manipulation of stimulus. The subject would be given tests designed to establish the smallest unit of sensation that consciousness can register (this idea that there are 'minima' of conscious experience goes back to Leibniz); they would be given objects of different weights and asked to report if one of them is heavier, or sounds of

different volumes and asked to report if one is louder. Bergson describes an experiment of this kind performed by Delboeuf with candles to investigate the sensation of changes in brightness (TFW 51-60; O 37-42). Through a comparison of the methods and results of psychophysics with those of "immediate experience" Bergson found that any change in sensation is not in fact due to an increase or decrease in intensity of a single state, but to the shifting dynamics of the whole of consciousness (and in chapter one this consciousness is explicitly regarded as embodied). – Second (in chapter two), Bergson looks at the general conception of consciousness that is implied in both experimental psychology and the debates over free will, and identifies this as a "discrete multiplicity" of conscious states that occupy a "homogenous medium" of consciousness. Again, he suggests that immediate experience reveals the very opposite: consciousness is better understood as a "heterogeneous medium" in which conscious states form a "continuous multiplicity". – The model of consciousness set out in these two chapters forms the basis of the critique of determinism and libertarianism, and the new conception of freedom that Bergson develops in the third.[41] If the mind is not adequately represented as a collection of discrete mental states, then freedom cannot be a choice between alternative possibilities, nor can action be causally determined. Bergson introduces a third option, based in his new conception of consciousness; a definition of freedom as a holistic self-organisation of consciousness that is neither reducible to the intensity of, nor interaction between states, and is therefore neither determined nor predictable.

The significance of this early text for an understanding of Bergson's social thought depends to a large extent on how we interpret it. The difficulty lies in the fact that the central theoretical components of the work all form part of the account of the reality and efficacy of society that Bergson will develop later, but in the specific context of his *Time and Free Will* project – where they are used to clarify the nature of consciousness and freedom – they actually appear to preclude any real efficacy of the social in the individual, and thus rule out any concept of freedom as an intrinsic participation in social evolution. It is essential, then, that we separate concepts such as duration, freedom and continuous multiplicity from their specific applications in this text if we are to see how they may be applied in the context of the very different project of *The*

Two Sources of Morality and Religion. Let us see how the two multiplicities that Bergson worked out in his first text can be re-interpreted in light of the two social multiplicities that he worked out in his last.

The lasting contribution of *Time and Free Will* is the disanalogy that Bergson introduces between time and space, based in his definition of conscious duration as a continuous multiplicity that occupies a heterogeneous medium. It is a distinction that Bergson will use throughout his work, and underlies the many dualisms he uses, including the concepts of the closed and the open that he introduces in *The Two Sources of Morality and Religion*. Yet we have said that the concept of the open was absolutely new in that text, and that it shifted the focus of his whole philosophy away from individual freedom and towards an emphasis on a participation in the evolution of society and nature. This raises the question of the whole movement of Bergson's philosophical work (which, incidentally, mirrors that of creative action in his work): how can the concept of a continuous multiplicity, which Bergson initially characterised as internal to individual consciousness, come in the end to characterise society and even entail a critique of the individual itself as, in retrospect, an abstract conception? This is, in fact, only a contradiction as far as the intellect is concerned; that is to say, it is only a problem if we think a relation between parts – in this case the social relation between individuals – can only be extrinsic. As we saw in the last chapter, society is only superficially a relation between individual consciousnesses; fundamentally it is intrinsic to consciousness itself, as much as individuality. Thus, it is not that the concept of a continuous multiplicity changes, but that its distribution changes, and what is more, that its distribution had to change according to its own logic (the imprisonment of continuity within discontinuity – whether in the form of social or physical space – was never a satisfactory aspect of *Time and Free Will*, even to Bergson himself who addressed it immediately in *Matter and Memory*).

In *Time and Free Will* duration is granted to consciousness alone (although in truth Bergson remains non-committal on whether matter really is spatial in that text), making the relation of this free consciousness to the world conceptually problematic. This is addressed in *Matter and Memory* when Bergson develops an account of the *extension* of matter in terms of a vastly different rhythm to the *duration* of consciousness; they are ultimately of the same

kind, but differ to such a degree that a difference in kind results between them: matter is determined whereas consciousness is a 'zone of indetermination' within it, due to its power to contract the vibrations of material continuity into the discontinuous objective world of perception. This explains the relation of consciousness to matter without recourse to representationalism, but it leaves the relation of one consciousness to another problematic (indeed, in *Matter and Memory* it can seem as if we are condemned to see people as objects). *Creative Evolution* did little to mitigate this problem: the relation of consciousnesses to each other is introduced, but as a lost unity. The intellect is characterised by antipathy, and it is along the opposite evolutionary tendency towards the polymorphous insects that Bergson claims conscious individuals remain literally sympathetic to each other. It is only in *The Two Sources of Morality and Religion*, with the recognition of the persistence of social organisation in the form of a 'virtual instinct' in humans themselves, that Bergson attributes an immediate and real continuity between consciousnesses themselves. The social is quite literally *in* the individual, and this unity of the individual and society *in each individual* is tangible at times of moral crisis, when a tension arises between the two levels of organisation. That is to say, there is an immediate experience of the double nature of the self as both social and individual in *The Two Sources of Morality and Religion*; and as we have seen, Bergson even suggests that it is in the tension arising from this double nature, rather than in any purity of individuality itself, that consciousness itself is constituted. Where society constrains the individual, consciousness is characterised as distressed; where the individual simply does what society requires of it, consciousness is characterised as absent (action being automatic and the individual 'an automaton'); and where society and individuality share in an evolutionary creation, consciousness is characterised by Bergson as joyful. These are the signs, as Bergson says, by which we know our *determination by a closing action of society* to preserve the order we, simply by being individual, are disturbing, from our active *participation in opening society up to an evolution* of new kinds of order, unimaginable on the basis of the present. These two *social* multiplicities are the two sources of not only morality and religion, but of consciousness itself.

Let us backtrack to *Time and Free Will*, then, and see what the extension of the concept of a continuous multiplicity to society can reveal about its first

application to consciousness alone. As I have noted, there is a degree of ambiguity in the book anyway, as if the notion of the continuous multiplicity was always straining against the contradiction of being locked inside individual consciousness. Knowing what happened when it got out; that there is real sympathy between individuals; and that true freedom is communal, let us see if this knowledge can help us interpret certain key aspects of *Time and Free Will* in such a way that 'the free individual' of Bergson's first text can find a place, without contradiction, in 'the open society' of his last. There are three particular issues I want to address, in order to work out their implications both for our understanding of *Time and Free Will* itself, and for our understanding of its place in Bergson's social thought.

– The first concerns Bergson's use of duration and space to designate internal and external experience, and particularly the status of space.

– The second concerns his use of duration and space to designate the surface and the depth of consciousness itself; in relation to this distinction I will focus on the internal dynamics of duration in this text.

– The third is a more extensive issue to which I will devote the next section; it concerns the precise nature of Bergson's criticism of the representation of consciousness as a discrete multiplicity by psychologists in pursuit of a 'scientific' study of the mind and by philosophers arguing for or against free will. A close examination of this critique will lead us to a view of duration that de-emphasises the language of 'purity' that Bergson uses and Deleuze takes up, and draws our attention instead to the articulations that populate and inhibit it. As with our discussion of the continuous multiplicity, this will not be based in a re-assessment of the criticism itself but of its extension – quite literally who it is directed at – and what this reveals about its nature.

Problems of conceiving Duration and Space as Internal and External

Throughout *Time and Free Will* Bergson oscillates between two ways of characterising the difference between duration and space. Sometimes he describes duration as internal and space as external, the one in consciousness and the other out in the material world, and sometimes he characterises them both as

internal to consciousness and distinguishes them as the surface and the depth of consciousness. Thus, while duration always pertains to consciousness, the status of space is in question; and this is partly connected to Bergson's reticence to commit to any definite account of matter in this text. Sometimes he speaks as if the external world is really spatial, and other times he speaks as if space is the form of outer intuition, in a somewhat Kantian sense. This status of space is important for us, because society, along with language and logic, is in a little family of concepts that all fall on the side of space in this text. This would suggest that society, at this stage in Bergson's thought, is either a kind of illusion or representation, or at best a superficial corruption of consciousness, something accidental that happens to it.

It is on this point that Bergson distinguishes between "immediate experience" and an experience of the self that is mediated or "refracted" through the external world. It is in the relation between these two "aspects" of consciousness that society plays a part in *Time and Free Will*.[42] It is worth noting, as it is of immediate relevance to the status of society in this text, that Bergson approaches the relation between these "immediate" and "refracted" aspects of experience in a very different way in each chapter. In chapter one Bergson makes constant reference to concrete experience and to research in psychology, and he ranges sensations in a continuum from "deep-seated" conscious states through to "representative sensations" that have external causes, taking in emotions such as joy and sorrow, and aesthetic and moral feelings. In chapter two we find a much more abstract consideration of the two kinds of multiplicity, made with reference to mathematics and to Zeno's paradoxes of motion, with little reference to actual experience until the final sections where he talks about the deep self and the social self. It is this second chapter that sets up a stark opposition between the two multiplicities (to represent time in terms of space is wrong) that greatly vitiate the understanding of the large part that conditions, inhibitions, articulations and determinations of all kinds play in Bergson's thought. Paradoxes of movement are one thing, but as Bachelard noted, it is by no means clear that we can say that consciousness is duration and therefore not spatial, if 'spatial' in this context means rich in detail. We will specify the real problem with the spatial representation of consciousness in due course. First let us note that Bergson does not, after *Time and Free Will* hold that

the external world is spatial. This is an essential movement for his social thought: there is duration outside consciousness.

Indeed, the 'space' that characterised Bergson's discrete multiplicity was a homogenous medium, it was pure geometry, and Bergson repeatedly refers to its quality of infinite divisibility. It is, then, Cartesian. We can go as far back as the corpuscular materialism of Galileo, Locke and Boyle to find a view of matter that was not spatial. The characterisation of matter in terms of extension on the one hand, or solidity and motion on the other, became polarised in the seventeenth century in debates surrounding the nature and existence of the void. By the time Bergson was writing, physics was more concerned with establishing a limit to the divisibility of matter; John Dalton, for example, in the early nineteenth century, establishing the distinction between atoms and molecules as essential to an understanding of different substances. A hydrogen atom is the smallest 'part' of hydrogen, beyond which it cannot be divided, but a water molecule, made up of hydrogen and oxygen atoms, is the smallest 'part' of water, because, while it can be divided into its component atoms, it cannot be divided without ceasing to be water. This view was revised in the late nineteenth century by a number of figures that Bergson had a keen interest in, referring to in both *Time and Free Will* and *Matter and Memory.* Michael Faraday, J. J. Thompson and others established that the atom itself was a compound, made up of electrical forces. It is this kind of work that Bergson is unsure how to interpret in *Time and Free Will*, but becomes more confident about in *Matter and Memory* where matter is characterised by vibrations, having a rhythm of duration so different to ours that we cannot experience it immediately. Thus we can rule out one of the major obstacles to bringing *Time and Free Will* under Bergson's social thought, his view that there is no duration outside consciousness. Statements such as "thus, within our ego, there is succession without mutual externality; outside the ego, in pure space, mutual externality without succession" (TFW 108; O 72-3) can only be of relevance to the study of the intellectual development of the thinker who will later say "the universe *endures*" (CE 7; O 503).

There is a further problem in this early phase of Bergson's social thought: he problematises the self-identity of a single consciousness *over time* – my consciousness, at once a collection of parts and an irreducible whole, qualitatively differs from itself – but this does not in itself problematise the self-

identity of that consciousness *over space* (and will not until he considers the evolution of consciousness in *Creative Evolution*). Of course, in *Time and Free Will* there was no alternative. In that text space is homogenous – it is only later that it will be seen as an ideal that matter, as a tendency *towards* space, never actually reaches – and the continuity that Bergson calls duration remains locked inside subjects who nevertheless remain locked outside each other, a discrete multiplicity of individuals in a homogenous social space. This difficulty is mitigated (although not eradicated) in *Matter and Memory* with the development of a concept of *extension* – an analogous concept to duration, signifying the continuity of matter rather than consciousness – but this outer continuity is only worked out in terms of the relation of the subject to the objects it perceives. There is no engagement with the fact that some of those objects are perceiving subjects themselves, or with the continuity between subjects that is implied by the now heterogeneous medium of extension that contains them. For the subject of *Matter and Memory* the other is only ever an object: represented but not intuited.

When Bergson comes to regard space as "an ideal limit in the direction of which material things develop, but which they do not actually attain" (CE 230; O 800), he removes a major obstacle to figuring the reality of society in his philosophy, establishing continuity between, as well as within, individuals at least at a material level. Is there any positive attribute of matter conceived as *extension* though, which can contribute to the picture of his social thought? Let us look at certain comments he makes in *Duration and Simultaneity* (1922) that are very brief, but draw a very curious connection between his social thought and his cosmogony.

In *Duration and Simultaneity*, Bergson's only references to society occur in chapter three "Concerning the Nature of Time" where he is considering how we pass from duration to measurable time.[43] In this book Bergson attempts to demonstrate that the paradoxes of relativity theory (concerning the contrasting results arrived at by different observers) arise from a confusion of real and imaginary time, real time being that which "has the property of being perceived or perceptible" (DS 46; M 120). As in his early works, he accounts for our passage "from pure duration to measurable time" (DS 34; M 103) in terms of its utility, and it is society that embodies the unfolding of time as a movement

independent of us. Now, on one level this appears unambiguous enough: real time is entirely dependent on us – there can only be a before and an after where there is consciousness and memory (DS 45-6; M 118-9) – so society would seem to be on the side of space and representation again. Let us look closely at what Bergson says though, for society is not only connected to ideal space, but to the real universe in *Duration and Simultaneity*, and as we remember from *Creative Evolution* "the universe *endures*" (CE 7; O 503). First, Bergson asks whether, when we represent our inner duration in terms of an impersonal time, we are comparable to the movement of a body through space (DS 35; M 104)? His answer: "Not entirely, for we live a social and even cosmic life" (DS 35; M 104). A little further on, with reference to the utility of taking the passage of time to be a general one independent of our own duration, he says:

> Society has taken it for us. It is the earth's rotational motion. But if we accept it, if we understand it as time and not just space, it is because a journey of our own body is always virtual in it, and *could have been* for us the unfolding of time. (DS 35-36; M 105)

So, we have a role for society much like that found in *Time and Free Will* where it is complicit in, if not actually a cause of, the fragmentation of real duration at the surface of the self. In this respect society remains connected to space. But we have something else as well here: society in some sense embodies an unfolding of time that is independent of the motion of our own body, and this unfolding is identified with the movement of the earth. There is much to untangle here, and it would be too much of a digression to enter on another discussion of the universe, so I will be content to note the outline of this strange connection. Accepting that the universe endures, and that society still spatialises our individual duration, is society now analogous to universal duration, as a vastly broader rhythm in which we are embedded? There is perhaps some analogy between the contraction of material vibrations into an object and the ideological aspect of social experience: we cannot always see culture evolving as it does so over long periods and so we take it as natural and conform to its ways (that is to say, we exteriorise ourselves)? Or is the analogy at the level of society as a heterogeneous multiplicity that contains all individuals, so that on the

surface they participate in one time, while in their depth each lives their own qualitatively different time? These are just speculations, and we will leave our examination of *Duration and Simultaneity* having noted some of the questions that may be raised by Bergson's comments in that text.

The Surface and Depth of Individual and Social Consciousness

Let us turn to Bergson's account of space and duration as the surface and depth of consciousness. While Bergson is consistent in his attribution of duration to the depth of consciousness and space to the surface, there is some ambiguity surrounding the status of each and the relation between them. Let us say straight away that some of his comments in *Time and Free Will* sound as if they are fatal to any claim that Bergson demonstrates the reality and efficacy of society: "there are finally two different selves, one of which is, as it were, the external projection of the other, its spatial and, so to speak, social representation" (TFW 231; O 151). Now clearly Bergson does not stay with this view, and I would be inclined to say he does not hold to it even here, not only because of its consequences for his social thought, but because of its consequences for his account of individuality in this text. There are also many statements that contradict it. However, we cannot deny that Bergson often speaks as if we find the 'truth' or 'essence' of consciousness in the deep self, implying that the spatialised surface self is somehow contingent or even illusory, less real or even unreal. This is found in his constant references to 'pure' duration:

> In a word, pure duration might well be nothing but a succession of qualitative changes, which melt into and permeate one another, without precise outlines, without any tendency to externalize themselves in relation to one another, without any affiliation with number: it would be pure heterogeneity. (TFW 104; O 70)

What is this pure duration and pure heterogeneity? Is it the absence of space? It certainly sounds like it. But there is one striking problem with this account if it is, and again it is the problem we find in Deleuze's Bergsonism: if we assume we can remove space and keep duration then we inscribe a discontinuity under both, and therefore as fundamental. Consciousness must contain both multiplicities if

they are lived and experienced (and we will go into this in the next section), and if we could remove space – along with the language, logic and society that Bergson closely associates with it at this point – then consciousness would be divisible. This would be a very strange way to demonstrate that it is pure duration! But Bergson does not always describe the depth as some secret essence we can distil. He also describes duration as *one* tendency of conscious organisation:

> Pure duration is the form which the succession of our conscious states assumes when our ego lets itself live, when it refrains from separating its present state from its former states. For this purpose it need not be entirely absorbed in the passing sensation or idea; for then, on the contrary, it would no longer endure. Nor need it forget its former states: it is enough that, in recalling these states, it does not set them alongside its actual state as one point alongside another, but forms both the past and the present states into an organic whole, as happens when we recall the notes of a tune, melting, so to speak, into one another. (TFW 100; O 67)

This 'softer' account of duration is, from the perspective of Bergson's social thought, by far the more preferable, although it leads in the opposite direction to Deleuze's distillation of duration into an ontology. If pure duration is, as Bergson will often say, the 'ideal limit' of one tendency of consciousness, then space is preserved as the other tendency, and society is preserved along with it. It leads towards an emphasis on real conditions rather than transcendental conditions and it accepts a spatial side of consciousness that is a source of inhibition just as it accepts an enduring side of consciousness that is a source of creation. Let us see how this double nature of consciousness is revealed in the precise way Bergson applies his critique of space in *Time and Free Will.*

The Dynamics of Real Inhibition

There is a double nature of consciousness, just as there is a double nature of the real, making two attitudes possible. One is the participation in a creative evolution that is broader than the self, and serves as a basis – or rather, is a correlate – of the creative evolution of the self. If individual freedom is the freedom of the individual alone, then it is already based in the recognition of a

distinction between self and world that distributes agency to discrete agents in an external and homogenous multiplicity; it is this multiplicity that reacts upon the nature of the individual who apprehends it, rendering their freedom at best oppositional. We obey the natural tendency of our own nature to establish things for us in this way, in order to command nature itself. Or to put it another way, the sense we have of 'individual' freedom is a power to act on others and on nature according to our representation of them. In this section I will examine the dynamics of the real inhibition of freedom at three levels; first, with reference to an essential inhibition of duration itself; second, with reference to the real articulations in which we can participate, indeed, in which we cannot but participate when exercising real freedom; and third the contingent determinations that we need to overcome to achieve freedom but which can become co-opted into an oppositional attitude if we think that freedom is something that can be enjoyed alone, as a kind of inner purity. The key points arising from this section are:

- on this basis society can be identified as an articulation of life that essentially inhibits the duration of the individual; there is no duration that is not articulated at some level
- while there is much that is contingent in intellectual culture, there are forms of thought that reflect real articulations; those that are based in social articulations will express the interests of the biological organisation of the human society
- it is easy to misunderstand Bergson if we extract his statements from the critical discourse within which they are made; the antinomy formed of Deleuze and Bachelard's reading of him serves as an example of this

In examining this issue I will again be diverging from the usual way of understanding Bergson, and from Deleuze in particular, this time on the question of freedom. This time the divergence centres around the fact that true freedom cannot be the property of an individual who discovers the purity of their inner duration, because the alienation of the individual within society and nature that this view implies is already the product of a discontinuous relation to the world.

Spatialisation and Socialisation

There is no pure duration if that means an absence of space. Bergson rejects the spatial representation of consciousness because it excludes real duration, and he preserves real duration because it includes space. Bergson deals with the whole person, which means the double nature of the whole person:

> In place of an inner life whose successive phases, each unique of its kind, cannot be expressed in the fixed terms of language, we get a self which can be *artificially reconstructed*, and simple psychic states which can be added to and taken from one another just like the letters of the alphabet in forming words. Now, *this must not be thought to be a mode of symbolical representation only*, *for immediate intuition and discursive thought are one in concrete reality*, and the very mechanism by which we only meant at first to explain our conduct will end also by controlling it […] automatism will cover over freedom. (TFW 237; O 154, my italics)

If the spatialised or surface self is 'artificial' this does not mean it is merely representational or symbolic; it is the self as we have 'constructed' for our self, something we have made of ourselves or turned ourselves into. Duration and space are two tendencies of the self, two poles between which we both create and inhibit ourselves: "as this deeper self forms one and the same person with the superficial ego, the two seem to endure in the same way" (TFW 125-6; O 83). This statement does not suggest that the superficial ego *does not* endure, but that it does not endure *in the same way* as the deeper self. Nor does it suggest that duration is the reality and space merely an 'appearance'. Sticking to immediate experience, Bergson accepts the double nature of the whole person without attempting to reduce one side of that nature to the other. The two do not endure in the same way because they are opposite tendencies, and while the deep self tends towards indetermination, the superficial self tends towards inhibition. In this respect the duration of consciousness continues the forward movement of the duration of the universe, but it continues the internal dynamic of it also, which gave rise to the tendencies life and matter in the first place: the duration which pushes forward falls back on itself while the original movement continues through that which is falling back. Like life itself, consciousness – or "a life" –

is also a reality making itself through a reality that is unmaking itself. On this view, it is not difficult to reconcile the duration and space of *Time and Free Will* with the intellect and virtual instinct of *The Two Sources of Morality and Religion*. The tendency towards space, the movement that provides resistance to the creative duration of the deep self, is the place in *Time and Free Will* that can be connected with the virtual instinct of *The Two Sources of Morality and Religion.* It is no longer a merely contingent (or even Kantian) refraction of the self at the surface where it encounters society, but society in the self. Of the two sides of consciousness, the deep duration is in us, while the space that inhibits traverses all of us: it is virtual instinct. A useful image may be a rubber sheet spread horizontally, and pulled upwards at a number of points to form a kind of mountain range effect. Each point would be an individual, and insofar as they are removed from the horizontal their consciousness is individual, or *antipathetic*, but insofar as they remain a single sheet, there is another side to their consciousness, yet while each one might feel as if they contain both sides within themselves, this second side is spread throughout all of them; it is *sympathetic* (and we will see in the next section that the deep self too opens out to society through the medium of this sympathetic or 'virtual' instinct). If we add to our image the force of resistance that pulls the points down towards the horizontal, we can add that the social consciousness or 'spatialisation' is only superficially a refraction through an extrinsic medium, it is a resistance intrinsic to the individual itself, that the individual calls up by rising to a point and thus resisting the "tranquil state" of resting on the plane. The refraction would be a kind of intellectualization or adaptation formed on the basis of this more profound resistance:

> In proportion as the conditions of social life are more completely realized, the current which carries our conscious states from within outwards is strengthened. (TFW 138; O 91)

There is, then, a two-way causality between society and the individual. When Bergson says that "duration thus assumes the illusory form of a homogeneous medium" (TFW 110; O 74) he is not suggesting that the spatialisation of duration is an illusion; he is telling us that the representation of consciousness in spatial terms is an illusion because it excludes duration and hence excludes

spatialisation too; it excludes its own genesis. But Bergson is not dogmatic in his commitments, and when he privileges duration over space he is not swapping one substance for another, and thus preserving a mirror image of the dogmatism he opposes. He is justifiably dogmatic in what he denies, for what he denies is a theory that declares half of experience adequate to represent the whole, and the other half to be illusion! In affirming duration, he is affirming that which does not exclude space. This is what is often missed. The 'choice' between the two models of consciousness, duration and space, is *asymmetrical*: (abstract) space excludes duration, but duration does not exclude (real) space. As in his biology, Bergson rejects the hypothesis of determinism, and thereby allows us to understand all the better the workings of real determinations, or 'articulations' as he more usually calls them (and I will examine these real articulations in the next section). This asymmetry between what he affirms and what he denies is the advantage of Bergson's approach, but it is one that has been overlooked by both his supporters and his critics.

The Extension of Bergson's Concepts and Critiques

On a superficial level, it appears that Deleuze and Bachelard could not have diverged any further in their assessment of Bergson, the former emphasising the purity of duration and raising the virtual to the status of an ontology, and the latter denying the existence of duration and claiming the fundamental reality is a series of actual instants. Looking deeper into their responses however, we will see that both depend on the same understanding of Bergson's project – and it is this understanding that I would like to suggest conflates two different levels at which the critique of space, and affirmation of duration, is pitched in *Time and Free Will* and in Bergson's work generally. They do not pay attention to what I called the *extension* of Bergson's critique, and this leads them both to understand the two multiplicities as separate or divisible: this is the basis of both Deleuze's championing of Bergson and Bachelard's rejection of him. Thus, we could say they form a kind of antinomy, with the difference in their assessment of him resting on the deep similarity in the way they both understand what he says. It is an understanding that tends to efface the double nature of the person, the world

and the relation between them in Bergson's philosophy, and consequently effaces the very possibility of recognising the value of his social thought. Before we see how Deleuze's positive response to duration is in fact based in the same superficial grasp of the concept that led Bachelard to reject it, let us briefly consider the background to Bergson's affirmation of duration.

Bergson's philosophy is developed against a background of "spiritualistic positivism", a popular school of late nineteenth century French philosophy. Thinkers like Jules Lachelier and Émile Boutroux emphasised the immediate experience of the inner self as a source of freedom, and argued that a notion of "free causation" should be as important as the notion of law in the natural sciences. (Gayon 2005: 47) However, while there is nothing in the content of these theories regarding spirit that Bergson would disagree with, it seems to me that he would not have agreed had he not arrived at them by a very different method. That is to say, Bergson's theory of duration is not the product of a spiritualistic positivist. It is a product of the empirical research of a philosopher of science:

> I cannot stop myself from giving a great deal of importance to the change that took place in my way of thinking in the two years that followed my graduation from the École Normale, between 1881 and 1883 […] My intention was to devote myself to what at the time was called "the philosophy of science" and it was with this aim that, after graduating from the École Normale, I had begun to study a number of fundamentally scientific notions. *It was the analysis of the notion of time, as it intervenes in mechanics and physics, that overturned all my ideas*. To my great surprise I realised that scientific time had no *duration*, that nothing would change in our scientific knowledge of the world if all of reality took place at once, all in a single instant, and that positive science fundamentally involves eliminating duration. (Letter to William James, May 9, 1908: M 765-6, my italics)

This suggests that despite Bergson's emphasis on inner experience as the only sure means of confirming, experimentally, that there is in fact real duration, his discovery *of* that duration was first of all the discovery of a lacuna in mechanics and physics made from the perspective of a philosopher of science. The emphasis on duration as inner experience, which would for better or worse come to characterise Bergson's thought, came later, when he began to explore the effects of this "elimination of duration" in a range of scientific fields, beginning

with psychology in *Time and Free Will*.

Deleuze does not make an appeal to experience to support duration in its purity, heterogeneity, continuity etc, but to definitions and logical connections between these concepts. In this respect Deleuze differs greatly from Bergson: the high level of abstraction, the emphasis on conceptual progression and the rigid step by step method that characterise *Bergsonism* are all alien to Bergson's own work. Indeed, perhaps the top concept in Deleuze's Bergsonian ontology – the Virtual – is not to be found in Bergson's own work, where the word is only ever used as an adjective, and more than one Bergson scholar has disputed the validity of *Bergsonism's* title.[44] Many Bergson scholars (Madeleine Barthelemy-Maudale, Pete Gunter, Suzanne Guerlac) have emphasised how the philosophy we find in *Bergsonism* is not Bergson's, while many Deleuze scholars (Michael Hardt, Eric Alliez) have emphasised the centrality of Bergson for Deleuze's thought.

What Deleuze initially found in Bergson's philosophy, in his essays of 1956, was a concept of difference that was not reducible to identity: "if the being of things is, in a certain way, in their differences of nature, we can hope that difference itself is something, that it has a nature, finally that it will deliver Being to us" (Deleuze 1999: 42). It is, above all, an ontology that Deleuze finds in Bergson – or we should say develops on the basis of an appropriation of certain of Bergson's concepts taken out of context – and in 1956 this is developed by Deleuze in the context of his own critical project regarding Hegelian dialectics; in 1966, in his book *Bergsonism* the focus shifts from difference and towards the development of an ontology of the Virtual. There is not time to go into these issues as deeply as we would wish. Let us note that in both engagements with Bergson, Deleuze emphasises the purity of the continuous multiplicity, to the point where he equates duration, memory, and *élan vital* under a single abstract difference or Virtual. In doing so, Deleuze not only misses the point of Bergson's critiques of determinism, mechanism etc., which is not to abolish the spatial but to see it in its real specificity rather than its abstract universality. The source of the spatial side of life, consciousness or society is not ontological in Bergson – it is evolutionary – and there is no unchanging condition underlying evolution; evolution is itself the evolution of conditions. Ontology is purely and simply the wrong word for what is clearly a cosmogony. Universal duration,

conscious duration, *élan vital*, creative emotion: all these have different dynamics in Bergson – we will examine them in detail in the next section – and this difference is irreducible to a common form. To attempt such an ontological reduction is to render the participation of one of the levels in another incomprehensible. However, in his search for *pure* difference Deleuze tends to throw out real articulations along with the actually contingent determinations that are truly differences of degree:

> So long as Bergson does not explicitly pose the problem of an ontological origin of space, it is rather a case of dividing the composite in two directions, only one of which (duration) is pure, the other (space) is the impurity that denatures it. Duration will be attained as "immediate datum" because it is associated with the right side, the good side of the composite. (Deleuze 1988: 38)

This passage, shocking in its reckless use of a moral language to describe the most abstract metaphysics, is a huge step backwards from Bergson's actual philosophy, reintroducing all the problems of representation that Bergson had overcome with his asymmetrical affirmation of duration over space. Thus, while this material looks very different when viewed in the context of Deleuze's oeuvre rather than as a response to Bergson (for Deleuze does in the end avoid the problems I am pointing out here), taken in its own right and reflected back on Bergson the results are disastrous. The purity that Deleuze perceives in Bergson's concept of duration leads far more naturally to the rejection of Bergson's thought than its affirmation, just as the discrete multiplicity with reference to which the libertarian argues for freedom lends itself far more readily to the determinist.

Now, Bachelard is not a great reader of Bergson – indeed, when he writes that Bergson ignored contingency in *Creative Evolution* one wonders if he could have possibly read the book (Bachelard 2000: 71) – and he is critical of the very basis of Bergson's philosophy, but his criticism is interesting in a way that Deleuze's advocacy is not. We should also note that whereas Deleuze's engagement with Bergson's thought takes place on the level of the most abstract rational metaphysics (Eric Alliez called Deleuze's Bergsonism a 'conceptology'), Bachelard engages with Bergson on his home turf, as it were: the immediate experience of one's own consciousness. In *L'intuition de l'instant*

(1932) Bachelard tells of how he had once accepted Bergson's philosophy, yet had become sceptical after trying and failing to experience in himself the 'pure duration' that Bergson describes. His critique of Bergson is based in the conviction that it is impossible to experience 'pure duration' – "we never managed to overcome the lavish heterogeneity of duration" (Bachelard 2000: 76) – and yet Bergson consistently describes duration *as* heterogeneous! This is a major blunder on Bachelard's part, but it serves to highlight the power that 'pure duration' has over the imagination: it can even lead a scholar such as Bachelard to completely mis-read Bergson as *denying* that duration is heterogeneous – when in fact he is dedicated to *establishing* that it is). In one sense, then, it was Bachelard's initial misunderstanding of Bergson's 'pure' as a 'homogenous' duration that led him to reject it because when he looked inside himself for *pure* duration he could not find it:

> Never at any time did we manage to lose ourselves so completely that we then truly found ourselves, nor did we ever meet with success in our efforts to reach and then follow something in us that is uniform and flowing, where duration slowly sets before us a life story in which nothing is lived, a happening in which nothing happens […]; always it was the embroidery that we saw, never the fabric, always the shadows and reflections mirrored on a restless river, never its deep pellucid waters. (Bachelard 2000: 77)

Not one word Bergson has written could lend itself to such a ridiculous interpretation. Or perhaps we should say *only* one word: *pure*. Indeed, Bachelard seems to have overlooked the admittedly peculiar description of duration we often find in Bergson as 'pure heterogeneity'.

As we have said, pure space excludes duration: this is the problem Bergson identifies. *It is not a problem he repeats*. Pure duration does not exclude real spatialisation, indeed it is nothing apart from it (and to be fair to Deleuze, even he recognises that virtuality has no existence independent of its actualisation, although his treatment remains deeply problematic as we will see), what it excludes is *ideal space*, that is to say, it excludes that which excludes *it*. This is the meaning of 'pure' in Bergson's philosophy, not some homogenous flow of nothing-in-particular, not some ontological plane of Virtuality. Perhaps it is a poor choice of word. It leads Bachelard to focus on the multiplicity of

immediate experience and, against Bergson, characterise it by this quality rather than its continuity: hence intuition reveals 'the instant'. But Bergson's intuition too was always of a multiplicity, so why was this lost on Bachelard? As we will see, Bachelard's intuition of the instant is just as valid as any intuition of duration, because what we find in the immediate experience of consciousness is not a deep self cleansed of all surface qualities, but the tension of the contrary tendencies of duration and space (or of the individual and social self). It is Bergson's tendency to express this tension with an extreme emphasis on only one of its sides in *Time and Free Will* (he is much more careful to avoid vitalism in *Creative Evolution*) that led Bachelard to reject his philosophy on the basis of his own immediate experience of the other side.

The reason for Bergson's emphasis – we may say over-emphasis – on duration was due to the critical context of his project in *Time and Free Will* which had to oppose a universal consensus among scientists and philosophers (the spiritualist tradition notwithstanding, although he distances himself from them on different grounds in *Matter and Memory*) that all questions relating to the mind could be adequately expressed in terms of space. Similarly, the reason for Bachelard's emphasis – again I would be tempted to say over-emphasis – on the instant was due to the critical context of his own project of demonstrating that the immediate experience of the self is not the pure duration that Bergson says it is. In reality, both thinkers want to keep both aspects of the whole person (Bachelard is no determinist, and sees the instant as the source of novelty just as Bergson sees duration). It is not a simple question of two ontological, or even psychological, commitments (although it is exclusively portrayed as such in the 'secondary' literature): it is a question of what aspects of a theory are emphasised in a particular critical context, and how these emphases can corrupt our understanding of a concept if we think we can lift it, unaltered, from the task for which it was designed.

I have spent some time considering two opposite ways of assessing Bergson's thought based in a near identical first impression, no doubt quickly formed, in which the *asymmetrical* nature of Bergson's affirmation of duration and critique of space is effaced. It is effaced because the emphasis of his presentation of

these concepts (*affirmation* in the former case, *criticism* in the latter) is taken to represent their essence, so to speak, rather than their application in a specific context. Let us now look at the two different extensions that this critique is given in the one book, *Time and Free Will*, in order to recover Bergson's actual account of the whole person, for it is this account alone that will bring this early text within the view of his philosophy as a whole that we have formed by placing his social thought at the centre.

As we have seen, Bergson seems to oscillate between two opposite accounts of space; on one page it is representation or illusion, on the next it is a real inhibition of duration. We should not treat this ambiguity *simplistically*, as if it is a matter of interpretation, in which we would decide once and for all what duration 'is' and what space 'is'. On the contrary, we should see it as a case of Bergson – who is after all an exceptionally *sophisticated* thinker – giving the same concept two different extensions, and emphasising different aspects of the concept in each case. This does not mean the concept itself is different; it means Bergson is sensitive to context in the use of his own theoretical apparatus. It only appears to be an issue of interpretation if we as readers are insensitive to context, and to the shifts in emphasis it provokes in Bergson, whose quest for precision in philosophy precisely meant a *specific* fitting of a concept to an object. Of course, Bergson says consciousness has duration, and that the universe has duration, even that matter has duration, *but duration is not a homogenous concept*. Bergson was highly aware of the components – unity, multiplicity, continuity – that it included, and of the different significance the concept takes on depending on how these components are taken up within it in a particular case (we will see at the end of this chapter that the dynamics of a 'virtual multiplicity' work differently in the evolution of life, consciousness and society – this concept of Bergson's is far from the dogmatic and abstract Virtual of Deleuze). Let us see, then, how Bergson extends his concept of duration (and critique of space) to two different objects in *Time and Free Will*, and how these applications are reflected in the precision of the concept itself (like every virtual multiplicity, the concept of duration is a context-dependent as well as a self-organising system).

Bergson does not engage in abstract or idle speculation, and if we want to understand what he says about consciousness we must bear in mind who he is

saying it to, for he is always engaging with actual research, and the presuppositions of the researcher will to some extent determine the way he expresses himself. What follows, then, is an incredibly simple, yet incredibly important point. It is the second distinction (after the asymmetry between what Bergson critiques and what he affirms) that Bachelard and Deleuze conflate, and which leads to their total misunderstanding of Bergson's philosophy: on the one hand, then, *when Bergson says that consciousness is merely represented in terms of space he is addressing the psychologist*, that is, the one who claims the whole of consciousness – however it may feel to the patient – can be adequately represented as a discrete multiplicity (it is, we may say, an *epistemological critique of determinism*); on the other hand though, *when Bergson says that consciousness is actually spatialised at its surface he is addressing the patient*, that is, the one whose immediate experience is not of pure freedom, but of the complex multiplicity of freedoms and determinations that is the ongoing organisation of every mind (we may call this an *existential account of freedom*). Recognising this fact reveals that the disagreement between Bergson and the psychophysicists is not a symmetrical one. When Fechner presents a spatial model of consciousness he is *excluding* the possibility of duration or indetermination (and therefore freedom) as real aspects of consciousness (and he is also – with the characteristic arrogance of the intellectual – telling the patient that he knows their mind better than they do). When Bergson, on the other hand, presents a model of consciousness as duration and freedom, he is *including* – more, he is providing a concrete basis on which to adequately account for – the determinations ('habits') and inhibited freedoms ('choices') that really populate its surface. Indeed, his critique of determinism and libertarianism in *Time and Free Will* is based in the fact that both approaches raise one kind of experience to represent the whole of consciousness: Bergson is not doing the same with duration – he is describing an unacknowledged third aspect of consciousness ('indetermination') which can be regarded as fundamental *precisely because* it does not entail the metaphysical problem of declaring other aspects of real experience – that of having choices, or even of having no choice – to be some kind of illusion. Bergson's affirmation of duration is not a rejection of determination or of choice – it is the only way of retaining them both, and retaining the integrity of the whole person. It would be simply absurd were

Bergson to tell us that we might *think* we had no choice, or that we only had two choices, but *really* we were free to create our own path all along. This would go against everything he says in *Time and Free Will* and develops in *Matter and Memory* about the degree to which our lives are dominated by habits.[45] Immediate experience reveals freedom *and* its inhibition – indeed, in *The Two Sources of Morality and Religion* it is the tension between them that takes centre stage and is even presented as the double source of consciousness itself. Bergson's *duration* does not sacrifice the complexity of real experience to the requirements of a simple definition of consciousness; it highlights the inadequacy of the approaches that do so.

This leads us to the importance of our distinction for Bergson's social thought. Throughout *Time and Free Will* society exists in a family of concepts, along with language, logic and utility, that all fall on the side of space rather than duration. If Bergson can maintain that space is a real surface of consciousness – despite his many descriptions of it as a mere representation of consciousness – this allows it, and therefore society, a real existence, albeit a negative one: *society is a real inhibition of duration*. Once this is established, all the brilliance of *Time and Free Will* can be brought to bear on the re-assessment of agency, freedom and individuality itself, that forms an essential part of Bergson's social thought, and we are no longer left with the book about purely internal and reactionary individual freedom that it has sadly come to be regarded as, whether favourably or unfavourably.

The Dynamics of Real Participation

We saw in chapter one that in the evolution of the universe, as in that of life on earth, there is a production of real discontinuity as organisation differentiates along different lines, but that there also remains real continuity since this dissociation is a complexification in which nothing is added, just as nothing is lost. There is then, in Bergson's universe, a *double* nature of the real: continuous *and* discontinuous. It is only when discontinuity, which can only ever be a *tendency towards* pure homogenous space, is represented *as* pure homogenous space that Bergson speaks of dismissing it. Real continuity (even when Bergson

somewhat misleadingly refers to it as 'pure' duration), itself only a tendency, always includes the opposite tendency towards discontinuity. To appeal to some level of 'real' continuity that would render discontinuity merely apparent is not an option within Bergson's philosophy: "it makes little difference to me if one says 'everything is mechanism' or 'everything is will': in either case everything is identical" (CM 49; O 1291). While such ontological gestures are redundant from Bergson's dynamic perspective, the two approaches have very different connotations for how we can think about reality. Mechanism excludes anything but linear causality, in which the past and future of a system are given, in principle, in any present moment. Beginning with universal duration as a creative action that falls back on and continues through itself, and which dissociates in doing so, Bergson introduces *irreversibility* at the very basis of his conception of reality, and on such a view there is no question of 'getting back to pure duration' if by this we understand some 'unconditioned' or 'virtual' condition of actual events that subsists unchanged and is not affected by them. On the contrary, it *persists within* them, so that each level of organisation that becomes dissociated within the Whole still performs the work of organisation that preceded it, as well as perfecting its own internal organisation. It is not only the continuity and indivisibility of time that establishes irreversibility for Bergson: more importantly it is the fact that *time affects itself*, like a feedback mechanism in which the effect reacts upon the cause.

For example, Bergson tells us how our solar system was differentiated within the universe, it has its own *rhythm*, and that rhythm persists within the evolution of living systems on earth. It does not determine them insofar as they have dissociated within it and become self-organising, but it does articulate them insofar as they remain an indivisible aspect of that broader virtual multiplicity of the solar system, at the same time as constituting a virtual multiplicity in themselves insofar as they too are a real whole, and no longer just a part of a greater whole. There is an important lesson to be learned here for any view of duration as a pure flow: days, months and years are *real*. Weeks and hours are not real – they are merely conventional or symbolic representations, and may be 'cut away' as Deleuze would say. But we must not cut away years, months and days along with them, for these are not representations but *real articulations* and there is no *living* system – on earth at least – that is not articulated according to

them. So we can reject 'clock-time', of course, but we cannot, if we are talking about Bergson, equate these real articulations or rhythms with it.

The same is true right down the line. The continued dissociation within life of different species, within species of different societies and within societies of different individuals results in a multiple articulation of the individual, which still 'performs' at all the broader levels that still include it. I still do what life needs me to do, I still do what society needs me to do, and what I choose to do as an individual *is not determined* as a result of this, for these levels of organsiation do not pertain to me insofar as I am self-organising as an individual. There remains, nevertheless, an aspect of what I think of as myself, an aspect that is co-extensive with myself both physically and psychically, *which is articulated* according to the organisation of society and of nature. The task of this section is to describe how Bergson's mature concept of freedom, while still demanding an effort against determinations, does not involve the liberation of our action from its conditions – or from what Bergson calls the articulations of the real – but precisely our participation in them, or rather, in their evolution. The key points arising from these issues are:

- there is a tendency of the experience of the deep self to be continued into an experience of what we can call a 'deep ecology' precisely because at the 'deep' level the self is not discontinuous within its social or natural milieu
- there is a tendency of individual freedom from determinations to be continued into a participation in real articulations, both social and natural (mysticism provides Bergson with a model for this participation)
- the nature of agency and causality at this 'deep' or 'participatory' level appears paradoxical; it requires that we no longer attempt to interpret it in terms of discrete individual agents

There is one potential misunderstanding we must avert straight away. It might be thought that Bergson's insistence that the intuitive effort we are capable of goes *against* the natural direction of thought means that we must somehow escape from nature in order to think and act freely. It is not nature *per se* but the

tendency of evolution to run out of steam in natural systems that close in upon themselves – whether through what Bergson called the 'torpor' of the individual organism or the adaptive relations that species get caught up in – that we must make an effort to resist. The natural direction of thought is the intellect, and the intellect is an adaptation. Let us not say, then, that Bergson thinks freedom lies in escaping nature, if by that we mean some flight into pure consciousness. The effort against nature is a participation in creative evolution itself, at every level, and this means an escape from what Bergson identified as a superficial level of adaptive evolution that our action gets sidetracked into instead of participating in a more fundamental creative evolution.

This is analogous to the transition I said takes place, across the whole of Bergson's oeuvre, from the internal freedom of *Time and Free Will*, which appeared to involve an escape from society (in fact it involved only an escape from the closed society), to the participation of the open soul in the open society of *The Two Sources of Morality and Religion.* It is time to see exactly how this participation, or opening of the soul, operates. We cannot define it according to any end, for as Bergson says it has no object and is creative of the ideas through which it will be expressed, but we can at least approach it *via negativa*, so to speak, by distinguishing it from the adaptive behaviour that follows from an intellectual attitude towards the self and the world, and the purely individual and reactionary conception of freedom that is established on that basis. Let us see first, then, how Bergson comes to conceive of the intuition of the 'deep self' as an opening out to others and to nature in his later work. We will then examine his use of the Christian mystic as a model for this kind of 'opening' action. The account of participation as a sympathetic relation of the individual both to other individuals and to the broader sources of its creative action will serve as the basis of our suggestions, in the conclusion, of the way in which the individual can participate in social and natural processes.

From the Deep Self to Deep Ecology

We could say *in retrospect* that the implication that individual freedom would extend into the participation in broader creative systems was contained in

Bergson's concept of a continuous multiplicity from the very beginning, but of course Bergson himself has taught us that things don't work that way. Let us say instead that participation was there potentially, and that it was a mixture of the immense effort that characterises Bergson's philosophical development, with the contingent elements that he encountered and drew into that philosophy, that resulted in the incredible transformations of *The Two Sources of Morality and Religion*. I will trace this effort through the various essays and minor writings that fall within the twenty-five year period that separates *The Two Sources of Morality and Religion* from *Creative Evolution* in order to see how intuition is deepened and broadened out during that period, to the point where Bergson finally altered his concept, not in its essence, but again in its extension, defining it as an indefinite inclusion of all life rather than the sole possession of an individual. I will then look more closely at how his encounter with mysticism developed during this period and eventually came to serve as the model for his new concept of freedom as participation.

Above all it is a mixture of pragmatism and religion that we see emerging during this period, in the essays produced around 1911 and around 1922. The concepts of 'attitude', 'participation', 'love' etc. that are developing in this double context do not yet have the precision they will gain in *The Two Sources of Morality and Religion* – we could say they are in the process of being actualised during the long period that book was in preparation – but they indicate the direction of his thought, and thus offer an insight into the new feeling with which he was taking forward his old concepts of intellect, intuition and action: Bergson's thought is moving away from its focus on the individual and towards community and nature.

We have already noted a certain development between *Creative Evolution* and the 1911 essay "Life and Consciousness". There he introduced the concept of the moral hero (called simply 'the moral man' at this point) who displays an intensity of creative action and whose example inspires others, the feeling of joy as the sign of creative action, and the idea of consciousness continuing into action in a language that foreshadows the remarkable passage describing the mystic experience in *The Two Sources of Morality and Religon*: "consciousness is tempering itself like steel and preparing itself for a more efficient action" (ME 27; O 835, see also TSMR 196-9; O 1169-72). In the

essays “Philosophical Intuition” and “The Perception of Change” from the same year we find two new characteristics: first, there is an emphasis on the practical role of intuition:

> Everyday life can be nourished and illuminated by it. (CM 128; O 1364)
>
> We shall be able to make it penetrate into our everyday life, and through it, obtain from philosophy satisfactions similar to those we receive from art, but more frequent, more continual and more accessible to the majority of men” (CM 157; O 1391)

The tone of Bergson’s comments on the implications of different kinds of knowledge for everyday life also foreshadows *The Two Sources of Morality and Religion*; this time the final passage that formulates the decision facing mankind as that between mere survival based on science and technology, and what we might call a ‘quality of life’ that can be found through philosophy: “with its applications which aim only at the convenience of existence, science gives us the promise of well-being, or at most of pleasure, but philosophy could already give us joy” (CM 129; O 1365, see also TSMR 274-5; O 1245). We will return to this point in the conclusion. This practical side is emphasised most strongly in the short essay on William James’ *Pragmatism*, “Truth and Reality”, which, following James, defines truth as an open future that we participate in creating, rather than a past or eternal ‘being’ that we discover. I will look at this particular essay in more detail in the conclusion, for it contains a clear account of the two attitudes or relations to the world that we can take.

Second, there is the introduction of a religious language, first in the use of a peculiar imagery of life and death to characterise the world of the intellect (the objective world is “a frozen vision of the real”, a “shadow of itself”, “cold as death” and objects are “phantoms”) while intuition “revivifies us”, and “warms and sets in motion” and “breathes life” into the phantoms, until “what is dead comes to life again” (see CM 128-9 & 157-8; O 1364-5 & 1391-2). Insignificant in itself, this language is worth noting in the context of Bergson’s developing interest in mysticism, which we shall turn to shortly, and also in light of the closing lines of “The Perception of Change” in which he introduces the notion of participation, yet in connection with a more problematic notion of transcendence:

> The more we immerse ourselves in [real duration], the more we set ourselves back in the direction of the principle, though it be transcendent, in which we participate and whose eternity is not to be an eternity of immutability, but an eternity of life: how, otherwise, could we live and move in it? *In ea vivimus et movemur et sumus*. (CM 158; O 1392)

There is a mixture of elements at work here. On the one hand, the transcendent principle is not eternal in the traditional sense, but an 'eternity of life' which we can quite easily relate to the universal duration of *Creative Evolution* via Bergson's use of the phrase *sub specie durationis* in substitution for *sub specie aeternitatis* immediately before this passage. However, the transcendence of this principle is more of a problem, as it would seem to be in conflict with its nature as duration. It is possible that Bergson could refer to it as transcendent because it is an 'ideal limit', a formulation he often uses but as far as I am aware he does not use the word transcendent in connection with it elsewhere. Neither does the Latin phrase help to clear things up. "*In ea vivimus et movemur et sumus*", which means "*in it we live and move and exist*", is a corruption of "*in ipso inem vivimus et movemur et sumus*" from the Bible (Acts 17:28), which means "*in Him, indeed, we live and move and exist*". Thus, we have Bergson quoting from scripture on the one hand, which would seem to suggest a stronger use of the word transcendent even given his rejection of the traditional 'attribute' of eternal; but on the other hand, he is switching the Latin pronoun *ipso*, which can mean 'him' or 'it' (and would generally be translated as 'Him' in the context of scripture), for the pronoun *ea*, which unequivocally means 'it'. This would suggest he is using transcendent in a weaker sense if he is also distancing himself (albeit somewhat obscurely) from any theistic implications.

In "Truth and Reality" we find the first published references to mysticism, which centre around Bergson's admiration for the way James refuses to regard mystical experience as pathological, suggesting that the 'spiritualism' of the mystic is a real cause of their experience and not the effect of a physiological or psychological disturbance. This intuition – the decision to take mysticism seriously – inspired by James' sympathetic account of mystic experience, lies at the heart of Bergson's engagement with the field; he does not presume to explain it but to learn from it:

> The powerful feelings which stir the soul at certain special moments are forces as real as those that interest the physicist; man does not create them any more than he creates heat or light. According to James, we bathe in an atmosphere traversed by great spiritual currents. If many of us resist, others allow themselves to be carried along. And there are certain souls which open wide to the beneficent breeze. These are the mystic souls. (CM 212; O 1443)

This defence of mysticism is well grounded in Bergson's work on thermodynamics: what the physicist studies is the material tendency towards entropy, a tendency that pertains to externalisation and results in the appearance of an objective science. The mystic, on the other hand, is in a relation to the vital tendency towards creation that pertains to unity and rules out the possibility of an extrinsic relation. To adopt the perspective of the physicist towards continuity is a misapplication that not only results in the failure to grasp the 'object' but also leads to the aggressive 'explanation' of the experiences of those who do in terms of an actually graspable physical cause (mysticism as pathological). Bergson emphasises that this virtual tendency, which preserves unity across the whole discontinuity of subjects and objects that it produces (and which are *also* real) is as broad as life, yet is experienced from within. Mysticism is not a subjective science – the very distinction of 'subjective' and 'objective' only have meaning in the context of discontinuity – but a participation in the real continuity of evolution. Hence, this participation is described for the first time as an action of the 'open soul'. However, there is something paradoxical in this opening, for it is described in terms of *passivity* rather than the effort that Bergson usually attaches to creative action. This is not some shift in position, but a necessary development of the notion of intuition when it opens out onto creative evolution, and is no longer the action of a discrete agent but the participation in a broader creative agency.

The 'opening of the soul' and 'participation in creation' are found again in the group of essays written around ten years later. Here they are again connected to passivity as well as effort, and again there is a pragmatic tone suggesting it is no longer merely an effort of thought, but one that is continued into action. In "The Possible and The Real" of 1920, Bergson describes "the continual creation of unforeseeable novelty that seems to be going on in the

universe" and claims that he feels it most vividly within himself "before the action I willed and of which I was sole master" (CM 91; O 1331-2). This action is again known by the joy that comes with it, but also by a "strength" that is somehow born of the passivity involved in 'opening':

> But above all we shall have greater strength, for *we shall feel we are participating, creators of ourselves, in the great work of creation which is the origin of all things* and which goes on before our eyes. By getting hold of itself, our faculty for acting will become intensified. Humbled heretofore in an attitude of obedience, slaves of certain vaguely felt natural necessities, we shall once more stand erect, masters associated with a greater Master. (CM 105-6; O 1345, my italics)

This curious equation between being at one and the same time 'creators of ourselves' and 'under a Master' is one of a number of apparent paradoxes that arise from the attempt to express the notion of agency as participation in language. As Bergson continually reminds us, language is best suited to the intellectual apprehension of the world as a discrete multiplicity. This re-contextualised creative action does not pertain to discrete individuality and is not adequately represented according to the logic of extrinsic relations between parts that would dictate each must be understood as active *or* passive. In the creative participation in a broader creative process, the individual is both; it is only when we capitulate to the adaptive pressures of the closed society that our relations to others become extrinsic and our freedom is inhibited or, as we have been saying, *merely* individual. In the same way that Bergson says *Homo sapiens* tends to merge into *Homo faber* when we relate knowledge back to its essence in fabrication, so we could say *Homo genero* tends to merge into *Homo pasilibis* when we relate our creativity to its source.

Let us draw these elements together. There is a development of Bergson's thought, following *Creative Evolution*, which does not cease to associate continuity with internality, but it does cease to associate internality with individuality, in the sense of the conscious, human individual. First, society is *within* the consciousness of each individual in the form of a virtual instinct, limiting the other individual side of the whole person. Second, this virtual instinct does not share the boundary of the individual but is continuously spread throughout society – so that it is perhaps better to say the individual is in it.

While this real *sympathy* inhibits individuals, then, by articulating all as one through the functions that become apparent to us as morality and religion, acting on the soul, as Bergson says, like the force of gravity acts on the body, it also provides a medium through which individual action can reach further than the indetermination that pertains to their self-organisation, and participate in the social organisation itself, taking it, this time, in the direction of indetermination. Thus, while the individual can find some freedom from social determination by engaging in a self-organisation that is indeterminate, yet avoids the internal tension that comes with a departure from social organisation (this, perhaps, would be the freedom of philosophical thought or artistic practice – the egocentric, apolitical and elitist 'creativity' of vague Bergsonism), it is not in doing so realising the full potential of what freedom can be. For Bergson, individual freedom can broaden out and become social freedom, as in the 'moral hero' and the mystic.

In the end, then, what Bergson discovered through the intuition of the deep self was a way out of individuality and into what we could call 'deep ecology'. The term 'deep ecology' was coined in 1973 by Arne Næss to describe nature as an evolving whole, appearing in the context of an argument that ethical questions about our action cannot be adequately treated by a logical engagement with discrete facts since we, and all beings, are aspects of a single evolving reality. As a position within ecology, deep ecology emphasises a number of elements that are consistent with Bergson's thought: based in the holistic understanding of nature that is central to ecology in general, deep ecology has a particular focus on a contextualised approach to understanding individual action, a practical responsibility to bring about social and political change, a critique of anthropocentric perspectives on nature and our relation to it, and the adoption instead of an eco-centric perspective on our actions, particularly those that have a high impact on the environment (I will return to this last point in particular in the conclusion). I use the term, then, in the first place because it clarifies the difference between Bergson's early understanding of freedom as internal to the 'deep self' and his later understanding of the 'deep self' as a *continuity* that by definition extends outwards beyond the individual to the social and natural processes of which the individual remains an aspect (and the freedom of the self thus becomes inseparable from and in no sense opposed to the participation in

society and nature). I use it in the second place because it already exists, naming a field that it is useful for Bergson scholars to be aware of, focussing on many of the same issues – most importantly the responsibilities of individual freedom when re-contextualised in a holistic understanding of social and natural evolution – in a scientific context.

The 'internal continuity' of conscious duration is organised within an 'external continuity' that it is never entirely sealed off from (it is hard to even talk about this process without using paradoxical formulations – as we have seen, the distinction between inner and outer doesn't even pertain to continuity, but we are stuck with language and will do our best with it). In the 1922 essay "The Stating of Problems" there is a long description of how the intuition of the deep self of *Time and Free Will* is only the first stop in a journey out into 'deep ecology':

> Intuition, then, signifies first of all consciousness, but immediate consciousness […] Next, it is consciousness extended, pressing upon the edge of an unconscious which gives way and which resists, which surrenders and which regains itself […] Does it not go even further? Is it merely the intuition of our selves? Between our consciousness and other consciousnesses the separation is less clear cut than between our body and other bodies, for it is space which makes these divisions sharp. Unreflecting sympathy and antipathy, which so often have that power of divination, give evidence of a possible interpenetration of human consciousnesses. It would appear, then, that phenomena of psychological endosmosis exist. It may be that intuition opens the way for us into consciousness in general. […] But is it only with consciousness that we are in sympathy? If every living being is born, develops and dies, if life is an evolution and if duration is in this case a reality, is there not also an intuition of the vital […]? Let us go still further. Above and beyond the organising process, unorganised matter appears as though decomposable into systems over which time slips without penetrating, […] but the material universe in its entirety keeps our consciousness waiting; it waits itself. (CM 32-3; O 1273-4)

I will follow Bergson as far as life. By his own terms, the only kind of participation we can have in the duration of matter is waiting for things, which is not in itself an entirely unhealthy practice in the context of industrial capitalism, but it is by definition not a reality in which we can participate: *it* makes *us* wait, there is nothing we can do to influence its evolution, which is, after all, a kind of

de-evolution, a tendency towards homogeneity. Intuition, perhaps, can reach this far, if Bergson is thinking here in speculative terms, but participation can only reach to the outermost circle of *living* systems (the question of identifying a border between life and matter is far too complex, not to mention too contested, an issue to go into here; but the idea that participation can only stretch as far as living systems need not imply the identification of any such 'border', for the differences in degree that measure the transition from the unicellular to the slime to the crystal will 'amount to a difference in kind' as Bergson says, with a border that is marked by the very possibility of a sympathetic or participatory relation to them – I will address this question in detail in the conclusion). The question remains as to how the individual, having enjoyed individual freedom by getting in touch with their inner duration, may share it with society and nature. It is easy to imagine an individual in possession of their own will, moving their body around, but how should we picture the action of moving society itself? And how should we distinguish this from the implications of opposition that arise when we (quite naturally) think of it in individualistic terms (for example, we may ask what happens if two participatory actions want to take social evolution in two different directions)? I will defer such specific questions to the conclusion, focussing for the present on the resources Bergson draws on to develop his early notion of individual freedom into the fundamentally social and ecological 'open soul' of *The Two Sources of Morality and Religion*. It is through mysticism that Bergson attempts to get to grips with the extensive agency of participation, and to clarify the curious paradoxes – not least pertaining to the identity of passivity with activity – that arise from it.

Mysticism as a Model for Participation

So, we want to know what mysticism contributes to our understanding of Bergson's account of freedom as participation – a notion that was virtually contained in his previous philosophy, and appears to have been actualised by his encounter with religion. Before clarifying this issue, let us summarise what we have said of participation so far. It is a term Bergson uses infrequently, but nevertheless one I am emphasising to describe freedom in relation to our new

understanding of the individual as a self-organising process that remains articulated by the broader, social and natural self-organising processes within which it is differentiated and which remain immanent to it. These articulations may act as determinations (to eat several times a day, to sleep once a day, to feel guilt or be superstitious) but this only takes on a negative connotation if we represent society and nature as discrete multiplicities and the individual as a self-identical discrete entity bearing an extrinsic relation to them. As I have said, by the time we reach *The Two Sources of Morality and Religion* freedom for Bergson is no longer freedom *from* social and natural conditions but freedom *to* participate in the evolution of them. Before examining how Bergson's 'mystic' serves as a model for this notion of freedom as participation, let us briefly differentiate our use of the term from its use in medieval theology (and in the conclusion we will look at the use of the term in contemporary biology, and also at concrete examples of participatory action in different contexts).

We should say first of all that Bergson's is not the participation of scholasticism; he does not refer at all to Aquinas, although it does not seem possible that he could have used the term participation, especially in connection to God, without being aware of the tradition he was invoking. Participation in Aquinas' theology was an essentially teleological notion, connected to the aspiration of the soul towards God. It occurs in the context of his discussion of 'natural law' in the *Summa Theologica* (c.1265-74), which is the 'participation' of the divine reason in the finite being: every rational creature "has a share of the Eternal Reason, whereby it has a natural inclination to its proper act and end: and this participation of the eternal law in the rational creature is called the natural law" (Aquinas 1948: ST. I.II. Q.91. A.2). Although Bergson never wrote about Aquinas, we may assume that he would have the same fundamental reservations in this case that he does about Aristotle: the language might be one of aspiration, but it is an aspiration towards an idea that is given in advance. In this respect Bergson's reversal of the causal direction of the traditional concept of participation is significant; in Aquinas, there is a participation of the divine reason in the reason of the finite being – it is God that is active, drawing the individual towards a greater approximation of His perfection through the natural law; the 'inclination' of the individual towards its proper end is passive, like the inclination of a bit of iron towards a magnet. In Bergson, it is always the

individual who participates in social or natural evolution. This reversal of the usual terminology can be no accident, and expresses the difference in kind between the 'active-passive' relation of the traditional 'Creator and created', and what we might call the 'active-active' relation we need to examine between what we might term Bergson's 'Creative and creative' (in the sense of, 'Creative universe and creative humanity'). We have already noted (in footnote 41) that the question of free will did not become a stark 'either/or' question until the emergence of dualism in the wake of the scientific revolution; we see now that for the predominantly teleological thought that preceded scientific mechanism the question of freedom was a question of the harmony of the individual will with God's will (of which it was held to be an indivisible part).

What Bergson found in mysticism, then, was a model for thinking of freedom as the participation in society and nature, a commitment to the continuation of contemplation into action, and a holistic discourse that was alone adequate to express an experience and action that go beyond both intellectuality and individuality. If his engagement with it is somewhat opaque by philosophical standards, this is because he does not set himself up as a judge, but follows William James in accepting the integrity of the mystic experience. In his *Varieties of Religious Experience* (1902) James had devoted two long chapters to demonstrating that mysticism is neither pathological nor unique by presenting a wide range of literature, both from the mystic tradition and from 'secular' fiction and poetry, which demonstrated the psychological validity (if not the theological verity) of the 'mystic' experience through its ubiquity. Bergson accepts all this from James, insisting even further that the "simplest explanation" of the similarity between the accounts mystics give of their experience lies neither in a common malady nor in a shared cultural heritage but in the actual existence of the Being they claim to have experience of!

Bergson was working on mysticism as early as 1909, when he presented a report on Henri Delacroix's *Études d'histoire et de psychologie du mysticisme* (1908) to the Academie des Sciences Morales et Politiques. It is from this text that Bergson takes what will be one of the most important aspects of his mysticism: the expansion of the term to designate not only the experience but the subsequent vocation of the mystic, and the resulting distinction between incomplete mysticism which stops with contemplation, and complete mysticism

which continues into action. It is the emphasis on action above all else that seems to attract Bergson to the mystic tradition, and as we will see, he suggests that philosophy can learn from it in that respect. This active or 'practical mysticism' was taken up by Evelyn Underhill in a more everyday context. Underhill was a major advocate of mysticism as an essential corrective to the emotional stress of living in modern society. Writing in the early twentieth century, she had made extensive reference to Bergson in her 1911 book *Mysticism: A Study in the Nature and Development of Man's Spiritual Consciousness*, which Bergson acknowledges in a footnote in *The Two Sources of Morality and Religion*. However, in a note added to the twelfth edition in 1930, Underhill says that had she written the work then, she would not have used Bergson, but would have referred to more contemporary knowledge! Underhill's book is an enormously impressive work of scholarship, relating mysticism to both a religious and a scientific tradition, and Bergson occurs mainly in the context of her discussion of evolutionary biology, with *Creative Evolution* falling on the side of evolution theories that are not incompatible with religion. In this respect she shares his critical views in regards to mechanism but comes to regret giving credence to what she, like many, saw as his vitalism. If Bergson took anything from Underhill, it was perhaps the down to earth interpretation of action in terms of everyday life, which persists through *The Two Sources of Morality and Religion* alongside the more striking mystics and heroes.

Aside from James, Delacroix and Underhill, admittedly the three giants of the field at that time, Bergson does not engage with any critical literature on the topic, preferring to treat mysticism directly, even at times adopting the language and tropes of the mystic writers. Unfortunately, this tends on the whole to homogenise mysticism. Bergson does not engage directly with the writings of any particular mystic preferring to distil a certain essence from them. No doubt, the generalised account he presents is derived to some extent from Delacroix and Underhill who both provide an account of 'key stages' through which 'the mystic' passes, but they do so in the context of detailed (encyclopaedic in Underhill's case) historical and psychological studies. This absence of detail in Bergson's account is problematic, because while we can say with certainty that Bergson found certain things in mysticism that he saw as lacking in philosophy, there remain some ambiguities about his relation to it, particularly surrounding

its relation to his own Christianity. If he had written about key topics in mysticism such as the relation of God to the Godhead, the role of Christ as mediator in the experience of God, or even commented on the double nature of the tradition with its roots in both philosophy (Plotinus) and in Christianity (St John and St Paul), then the importance of mysticism, as he saw it, would have been clearer. As it stands, its importance seems to rest most solidly in the relation between it and technology as the two poles of a historical dichotomy between two tendencies of modern culture towards asceticism and luxury (I will return to this issue in the conclusion).

His championing of specifically Christian mysticism presents a greater difficulty. What are we to make of Bergson's opinion (and it is only an opinion) that it is in Christianity alone that mysticism attains its full power of action? This would seem to endorse one of the more controversial comments attributed to Jesus in the New Testament, a favourite of fundamentalists: *'I am the way, and the truth, and the life. No one comes to the Father except through me'* (John 6: 14). His distinction of pure contemplation and a contemplation that leads to action is a good one in principle, but his attribution of the latter to Christianity alone reflects neither the active mysticism that is found outside that tradition, nor the heterogeneous mixture of elements that is found within it. Likewise, his distinction between an insufficient impetus (in Greek mysticism) and a material obstruction to the impetus (in what he vaguely refers to as 'oriental' mysticism) is also a good one *in principle*, but in the latter case completely fails to support his point since the two great eras of Christian mysticism occurred during the disintegration of the Roman Empire and the volatile period known as the Reformation. We would be hard pressed to imagine a greater material obstruction! For example, the explosion of mysticism in Fourteenth Century England coincided with a time when a person could be burned if they were found in possession of a translation of the Bible; all those mystics wrote in the vernacular and quoted very heavily from scripture (we may also note that during this period one third of the population were claimed by the Black Death that swept Europe twice in the Fourteenth century). In short, there is no denying that Bergson's suggestion that the impetus of 'oriental mysticism' was thwarted by material hardship is a weak one when the impetus of Christian mysticism flourished under far harsher conditions. Having acknowledged the presence of

these sometimes quite serious flaws in Bergson's knowledge of mysticism, let us move on and examine the remarkable account of creative action that he nevertheless derived from it.

We have been examining the parallel development in Bergson's thought of his discovery of our deep continuity with others and with nature, and of his development of a language and framework for expressing this drawn from religion and from mysticism in particular. These two great shifts of emphasis that his philosophy undergoes during the gestation of *The Two Sources of Morality and Religion* – away from individualism and towards something more social and ecological, and away from contemplation and towards something more active – come together in the shift of emphasis away from philosophy and towards mysticism within the text itself. I will return to this issue of the ultimate status of philosophy for Bergson at the very end of the thesis. The immediate task is to demonstrate that the following key elements of Bergson's account of mysticism form a coherent picture of the 'freedom as participation' that is central to Bergson's concerns in *The Two Sources of Morality and Religion*. By what criteria do I designate these as 'key elements'? Because they are explicitly developed for the first time by Bergson in the context of mysticism, because they are specific to mysticism (Bergson sometimes even presents them in opposition to philosophy) and because they are the elements of mysticism that allow him to present it as a potential corrective – perhaps the only potential corrective – to what he calls 'mechanics' (but what we can more generally term 'industrial capitalism' or even 'western culture'; Bergson's 'Final Remarks' are themselves cached out in very general terms) in his final chapter, and it is the importance of this shift in attitude, from mechanics to mysticism, that it is arguably the task of the whole book to impress upon us.

It is a central theme of all Bergson's work that thinking holistically is exceptionally difficult. Nowhere is this more evident than in his account of mysticism, to the extent that the four elements I am going to examine appear at first sight to be outright paradoxes. The first we have already come across:

participation is at once active *and* passive. Bergson describes this in the long passage in *The Two Sources of Morality and Religion* where he describes in detail the mystic experience as a transition from contemplation to action (TSMR 196-9; O 1170-3). First, the individual mystic approaches and eventually 'contemplates' or gains knowledge of God: "God is there, and the soul is in God" (TSMR 196; O 1170). This is not an absorption in the eternal but, in Bergson's dynamic terms, "a vibration on the spot" that is the preparation of a second, forward movement that is no longer that of the individual, but of God Himself acting through the individual: "now it is God who is acting through the soul, in the soul: the union is total, therefore final" (TSMR 198; O 1172). Now, this transition from contemplation, which ends with the soul in God, to action, which is continued by God in the soul, is not a switch from activity to passivity pure and simple. It is a switch from a conception of activity and passivity distributed among discrete agents, to a conception of activity and passivity in terms of a virtual multiplicity in which individual agents are participants in a wider whole – one which has creative agency in its own right – that articulates without determining them. For Bergson, the mystic is "a soul acting *and* acted upon, whose liberty *coincides with* the divine activity" (TSMR 198; O 1172, my italics). This equation of passivity with freedom appears paradoxical to the intellect, but regarded intuitively it is no contradiction: the mystics are "patients in respect to God, agents in respect to man" (TSMR 199; O 1173).

The second paradox will help to illuminate this: to be one with God is to differ from God. Identity = differentiation. Let us not forget what God is for Bergson: He is a dynamic principle. Insofar as He has substance He is a heterogeneous medium, and insofar as He 'contains' all individuals they are a continuous multiplicity. As such, any identity with Him must be a differentiation within Him, a creation of the self that goes beyond Him, just as he, in His duration, continually goes beyond Himself. It is the same dynamic that we observed in the organism in chapter one, where a recognition of the activity of the real whole did not efface the parts, but led to a real, rather than an abstract, understanding of their own activity. This is what Bergson learns about the individual from mysticism: individual action is ultimately an abstract conception, or, insofar as it is lived, an inhibited form of freedom: it does not progress beyond the contemplative (in thought) or the oppositional (in action). God acting

through the individual does not mean the individual is not active, and it does not mean the individual does not differ from God, precisely because God, for Bergson *differs from Himself* and does so – indeed can only do so – through His own heterogeneity, that is to say, through the creative individuals He contains: "the mystics unanimously bear witness that God needs us, just as we need God […], and it is to this very conclusion that the philosopher who holds to the mystic experience must come: creation will appear to him as God undertaking to create creators" (TSMR 218; O 1192).

If the reader experiences some resistance to this notion, perhaps because it is steeped in religious language, then the direct analogy with life, or *élan vital*, acting through a species or organism may make it easier to accept. We would not think of saying (in relation to Bergson's evolutionism) that if life is acting then the organism cannot be, or that it cannot differ from life. Being alive *means* to act and to differ (in other words to evolve), and like evolution, the mystic's activity has no end in view except to evolve beyond what is given: "do these advances always take place in the same direction? […] They had one thing in common: all aimed at opening what was closed" (TSMR 230; O 1202-3). This would appear to present a problem though, for if mystics, as heterogeneous creative agents, tend in diverse directions should they not, like species in evolution, diverge along different lines? This seems to be in contradiction to the unity Bergson attributes to the 'open society' as that which includes all humanity and overcomes the fragmentation and opposition between closed societies. It seems to preclude participation and lie closer to the reactionary individual freedom that I said mysticism allows Bergson to move beyond.

The third apparent 'paradox' can clarify that this is not the case: for Bergson, mysticism is "an essentially individual religion, one that has become thereby, it is true, more profoundly social" (TSMR 169; O 1144). How can the essentially individual be more profoundly social? In terms of the intellectual representation of society as nothing more than a collectivity of free individuals it cannot, but as we have seen, Bergson has left this atomistic model in the seventeenth century where it belongs. In terms of Bergson's understanding of society as a continuous multiplicity in which individuals are not discrete entities (although they may, and predominantly do, think and act as if they were), the essence of individuality is only fully realized in its participation in the wider

creative process of social evolution – an 'open soul in the open society', as Bergson says, and no longer a merely 'deep self'. The essentially individual (i.e. the free creative individual) is by definition 'profoundly' social (i.e. an indivisible aspect of social evolution). It is only the inhibited individual – the one who represents themselves and others as atomistic – who is mundanely social, that is to say who occupies what he takes to be a discrete social multiplicity where freedom can only be an individual reaction to, or flight from, what are represented as extrinsic determinations.

Finally, then, the most difficult point Bergson makes about the mystic – indeed, one of the most difficult points of *The Two Sources of Morality and Religion*. The mystic individual constitutes *a new species*:

> The diversity of these efforts could be summed up into one and the same thing: an impetus, which had ended in closed societies because it could carry matter no further along, but which later on is destined to be sought out and captured, in default of the species, by some privileged individual. This impetus is thus carried forward through the medium of certain men, each of whom thereby constitutes *a species composed of a single individual*. (TSMR 230-231; O 1203, my italics)

How are we to understand this statement? It seems to be the logical conclusion of the participation in a dynamic principle that one is dissociated within it, but how can this individual's evolution beyond the species also be a participation in society? Surely he is leaving society, if he is leaving the human species? We have seen that intense or profound individuality, qua participation, does not oppose so much as presuppose a deep connection to society (and nature). We can assume, then, that in saying the mystic constitutes a 'new species' Bergson is not suggesting that he is leaving society or nature behind. Is he, then, drawing it with him? What does this description achieve, and why does Bergson characterize it in biological terms?

To answer this, I will set out the final element of Bergson's social thought: the specific dynamics of society as a virtual multiplicity as distinguished from life and consciousness – and the reader must set aside here any residual attachment they have to the ontology that Deleuze wrongfully attributes to Bergson (whatever its merits in the context of his own philosophical project), for his conflation of duration, memory and *élan vital* in a single abstract Virtual

completely obscures the significant advances in the analysis of ethical and political action that Bergson's social philosophy accomplished: central to this analysis is the way in which responsible creative action is shown to involve the sensitive participation of the individual in the evolution of society and nature, and this requires distinguishing the precise dynamics of each. Now let us see how Bergson does so.

The Specific Dynamics of Society as a Virtual Multiplicity. The Mystic Gene.

Is the virtual multiplicity that is society the same as the virtual multiplicity that is life? Are the dynamics of change or evolution the same in each case? Recall that for Bergson, life explores possibilities by splitting and preserving alternative developments on divergent lines of evolution, which in their turn split up as tendencies are differentiated within them. Cultural evolution cannot be structurally analogous to natural evolution since this would mean a differentiation of humanity into a multiplicity of closed societies only some of which carry the impetus forward. This is not what Bergson affirms in *The Two Sources of Morality and Religion*, where the open society is heralded as precisely the opposite; it is an overcoming of humanity's fragmentation into closed societies.

What if the open society, as a virtual multiplicity, is one that resembles consciousness rather than life? In that case it would preserve a single course or 'live a single life' as Bergson says, abandoning alternatives and not, like life, preserving them. But this is not an adequate analogy either, for Bergson characterises the duration of consciousness by a dynamic organisation of the whole, in explicit distinction from the pressing forward of one part or individual (Bergson explicitly criticises the libertarian conception of freedom as a choice in which the 'stronger' mental state wins out), yet his account of cultural evolution (and the evolution of morality in particular) rests on precisely this pressing forward of the exemplary individual.

I would suggest that Bergson's identification of the mystic as 'a single individual who constitutes a new species' indicates a third dynamic of actualisation, somewhere between those he identifies at work in life and

consciousness, and that this is where social evolution is to be located. We can describe the three dynamics quite clearly with reference to the three sub-concepts that make up a virtual multiplicity and their different relations in each case: a virtual multiplicity for Bergson implies both (1) unity *and* (2) multiplicity; (3) continuity – in a qualitative or indistinct, and not an abstract mathematical sense – is the glue that holds these two contrary concepts together or reconciles them. Let us recall how Bergson distinguishes life and consciousness in these terms.

– First, then, in conscious duration it is *unity* that is the defining characteristic; the multiplicity of conscious states (the real discontinuity that leads to determinism or freedom as mere choice) is held in check in *Time and Free Will* by the unity of the whole of consciousness (the source of real freedom) – a struggle which is played out in the holistic evolution of consciousness through time (the fundamental continuity that underlies both).

– Second, in life, it is *multiplicity* that is the defining characteristic (whether related to its internal 'volatility' or to its encounter with matter): life in *Creative Evolution* can only 'explore its creative potential' by simultaneously developing in a multiplicity of different directions – unity is in the past, and exerts only a virtual or residual hold over the action of present species (the fundamental continuity here being ecological or quasi-teleological rather than temporal, and again underlying both the independence and the interdependence of species).

– Perhaps by taking the third term, *continuity* itself, as the defining characteristic of social evolution, we can make sense of Bergson's strange claim about the mystic. Certainly, what we have emphasised throughout this thesis is the *real continuity* between individuals that Bergson's social thought reveals, and the fact that in order to understand human thought and action we must recognise two equal sides of consciousness – the social and the individual or, we could say, unity and multiplicity. Continuity between individuals, then, could be said to hold unity and multiplicity together (society is immanent to individuals) without collapsing them into each other and rendering one unreal. What happens when we add time or evolution to this picture? It cannot pertain directly to society as a whole without effacing the real efficacy of individuals (this is what we saw in the ant-hill, which is an organic unity misrepresented as a society). Nor can evolution pertain to individuals without effacing the real efficacy of society (this

is what we saw in sociobiology, where social evolution is misrepresented as an epiphenomenon of natural evolution). If evolution pertains to continuity itself however, that is to say to a humanity at once multiple and communal, heterogeneous yet continuous, then it is clear that change in the whole will be 'located' as it were in certain points – Bergson's privileged individuals – just as a change in the whole organism is 'located' in the mutation of certain 'privileged' genes. Let us be clear: this is not to reduce any evolution of the whole – society or organism – to the action of its parts, but to recognise that the evolution of a *heterogeneous* whole precisely involves a dynamic in which the 'parts' fulfil diverse roles, some of which will inevitably be more instrumental than others in the direction that evolution is taking:

> If we went down to the roots of nature itself we might find that it is the same force manifesting itself directly, as it rotates on its own axis in the human species once constituted, and subsequently manifesting itself indirectly, through the medium of privileged persons, in order to drive humanity forwards. [...] [In the former case] you had a circle from which there would have been no escape, if one or several privileged souls, having expanded the social soul within themselves, had not broken the circle and drawn society after them. (TSMR 38 & 59; O 1017 & 1038, I have corrected the translation of the latter passage).

We can finally see, then, the sense in which the mystic can constitute 'a new species': the same force, the same evolutionary activity, may be seen at one and the same time as a motion of the whole or as a motion of those 'parts' or 'individuals' whose activity coincides with the motion of the whole. There is no question as to whether the parts affect the whole or the whole determines the parts because there is no discrete multiplicity, no atomistic mechanism, within which such a question would have meaning. Indeed, it is from this very mechanism that the mystic, according to Bergson, would deliver us, by demonstrating through his example our potential to participate in a creative evolution: "He will yearn to make of [humanity] a new species, or rather deliver it from the necessity of being a species; for every species means a collective halt, and complete existence is mobility in individuality" (TSMR 269; O 1240).

Let us draw this account of the place of the individual within society to a close by briefly reminding ourselves of this natural and cultural context, before

looking in the conclusion at the specific kinds of action that would count as a participation in natural and cultural evolution.

What is society for Bergson? We saw first of all that it is, along with individuality, one of two levels of organisation that define the natural evolution of humanity. A society, like the human species, is a virtual multiplicity. That is to say, it is a heterogeneous system constituted by differentiation within a broader heterogeneous system. The creative potential of this system is not realised by natural evolution, which has provided only for relative stability; according to nature the society and the individual condition each other in the manner Bergson describes as 'closed'. If the social-individual nexus is to open up to further evolution it will be through the action of 'privileged souls' who make use of the indetermination to go beyond instrumental thought and action and become 'creative'. This 'creativity' is performed at a cultural level that plays upon the natural like a variation on a theme: neither reducible to it nor entirely unconditioned. Yet it is not, in the end, creativity *per se* that Bergson is interested in (his 'mystic' does not transcend nature, society or even humanity), but a creativity that is in sympathy with, and able to further the evolution of, society itself. That he raises the mystic, in the end, to a position of importance that artists or even philosophers do not hold is possibly related to his own growing Christianity, it is certainly important to Bergson because of the language of 'love' that surrounds it and gives it a certain emotional colouring, but most importantly it is a product of his identification of a crisis point in human history, and his interpretation of it in terms of a dichotomy between what he calls 'mechanics' and mysticism. Let us look then, in conclusion, at the specifics of participatory action in the context of a certain 'social' crisis that Bergson identified, as well as in the context of the environmental crisis that is a defining concern of our own time.

Conclusion – Creative Revolution

Our examination of Bergson's social thought has led us to recognise that his philosophy as a whole culminates in an emphasis on action rather than contemplation. In conclusion, then, I will examine what practical directions the 'participation in the evolution of society and nature' that we arrived at in the last chapter may take in a number of concrete situations. This will bring us into contact with areas of thought and action that are not usually evoked by the name Bergson: we will look at democracy, revolution, free trade and genetic technologies among other large scale social and ecological practices that have a significant impact on our future. This is not to say that the metaphysical, epistemological or existential aspects of Bergson's thought are less important, and if I resist aligning Bergson with such preoccupations it is because, within academic philosophy at least, consideration of his thought has been limited to these areas. This conclusion, like the thesis as a whole, seeks to redress the balance and give voice to Bergson's *social* thought, to the valuable yet overlooked political and activist aspects of his philosophy.

Looking into these issues will bring us face to face, at last, with Bergson's "Final Remarks" – the last chapter of *The Two Sources of Morality and Religion* and therefore the last significant piece of original work that Bergson published. Subtitled "Mechanics and Mysticism" Bergson describes a shift in attitude that the human species needs to undergo if it wants to *live* rather than merely *survive*, and this conclusion will form an examination of what this means in concrete terms. Bergson describes how technological development has exacerbated the very worst aspects of human nature, focussing on the increasing scale of wars in the first half of the chapter and on the reduction of human aspiration to a mere desire for luxuries in industrial society in the second. He addresses the latter problem in broad historical terms, re-introducing mysticism as characteristic of a coming 'ascetic' phase in human history. War, he treats differently; unlike consumerism, which he seems to believe is a primarily cultural phenomenon and may be done away with over a few generations, the war-instinct is deeply embedded in our nature, and rather than addressing it directly he seeks instead to mitigate a number of its potential causes. I will

examine these issues in detail when examining participation in the 'open' society in section two.

If the crisis Bergson discusses in 1932 is primarily a social one, for us in 2010 it is also ecological, involving a set of issues around climate change, genetic technologies and depleting natural resources that simply did not exist in Bergson's day. Indeed, although his thought has turned out, in retrospect, to be uncannily compatible with twenty-first century science, he still remains among one of the last generations of philosophers who were able to think in terms of a natural world that is essentially impervious to human action. Now we have to think in terms of a world that is fundamentally, perhaps irreparably, damaged *by* human action (indeed, it is in this context most of all that Bergsonism must mean our active participation in the creation of conditions; it cannot remain a passive speculation on conditions of creation when those conditions are themselves under threat). I will not, however, attempt to 'reconstruct' what Bergson would have said about environmental issues, as I did with sociology in the introduction. Rather, I will look instead at what the contemporary biologist Brian Goodwin has to say on these topics. There are a number of remarkable parallels between *The Two Sources of Morality and Religion* and Goodwin's *Nature's Due: Healing Our Fragmented Culture* (which, incidentally, was also Goodwin's final book) that make the latter text a valuable companion to Bergson's. *Nature's Due* extends many of the same principles – creative evolution, human creativity as a participation in it, and the inseparability of responsible social and natural action – beyond the social and to nature itself; something, as I have said, that must occur with Bergson's 'open' society itself if it is to obey its own logic. The participation in nature will be the subject of the third section of this conclusion.

The practical and changing nature of the problems Bergson addresses in this text places severe limits on the contribution that traditional philosophical standards of truth are able to make to them, and we will see in section one, before turning to our examination of participatory practices, what alternative notion of truth Bergson is working with in order to recommend the shift in attitude that he does. Methodologically, what Bergson brings to these problems is a comprehensive demonstration of the dangers of 'mechanics', and a clear distinction between ways of working *with* society and nature (as creatively evolving processes in which we participate) from ways that might *try* to work

with them but are in fact as inhibitive as 'mechanics' itself (and for Bergson, these stem from an 'intellectualism' that would, without realising, replace the evolving reality with an 'ideal' and thus work against or inhibit the internal logics of organisation of natural and social processes). Bergson has often regretted that mechanics and ideals can be set out convincingly and with ease, while it is incredibly hard to demonstrate the value of intuition (and participation), and we could be tempted to say that he compounded this difficulty by turning to mysticism as a solution to the problems of industrial societies. However, I will do my best to cut through what is obscure in Bergson's mysticism and demonstrate (as I attempted to do in the last chapter) the contemporary value of the mode of activity that he is developing under that name. Whatever remained obscure about participation in theory, will hopefully become clearer when we examine particular examples of it.

A Shift in Attitude: From Control to Participation

What Bergson calls for in his "Final Remarks" – what he has always called for – is a shift in attitude, a shift that he articulated in a range of terms throughout his work: the earliest and most rudimentary (and still the most influential) is a shift from intellect to intuition, the latest and most sophisticated (and still the most overlooked) is a shift from the closed to the open. This shift in attitude always retains three core characteristics: first, *we are capable of bringing it about* through a combination of individual and communal efforts, sometimes characterised as efforts contrary to the natural direction of thought and action; second, *it is imperative to our wellbeing* if not to our very survival given the current dominance of 'mechanics' (industrial capitalism); and third, *it is a forwards movement, not a backwards one* in two senses: it is pragmatic and constructive (any talk of 'getting back to pure duration' is misleading – participation in the evolution of society and nature must necessarily work with its given context), and it does not involve the renunciation of our economic and technological infrastructures but their recontextualisation in a new attitude towards life.

What marks out participation in evolutionary processes most clearly from

simple creativity is the amount of precision involved: 'creativity' is already going on in natural and social processes – they 'know' how to organise themselves far better than we 'know' how to organise them – and we must learn, as individuals and as a culture, how to act in a way that is sympathetic rather than damaging to the 'articulations' of these real processes. Regarded as participatory then, a Bergsonian notion of freedom takes on different connotations to those usually attached to it: rather than the Deleuzian emphasis on capricious individualism, I wish to emphasise our responsibility to the environment and to each other. Creativity for its own sake is simply not good enough for Bergson: as we have said, is ultimately reactionary. It may characterise Bergson's early philosophy, and thanks to Deleuze it may, for many, continue to characterise his whole philosophy, but in *The Two Sources of Morality and Religion* Bergson is at pains to point out that humanity is capable of something much more *precise*. This is what makes his philosophy far weightier, and far more relevant, than is often recognised.

So how do we move from control to participation? There are three basic aspects involved: first, the re-interpretation of knowledge in terms of action; second, the recognition of inhibition even in supposed progress; and third, the development of precision in creative action. The first is the surest way of revealing the underlying attitude of a given theory or research practice and is especially revealing of the attitude of control, which is often to be found beneath a discourse of disinterested speculation. The second is revealing of how those intellectual approaches to problems that depend heavily upon some ideal with reference to which actual states of affairs should be re-organised can be inhibitive of natural logics of organisation. The third is essential if participation is to be significantly different from arbitrary creativity. I will look briefly at the nature of this shift in attitude before, in the following two sections, I clarify its meaning and demonstrate its value by referring it to concrete social and ecological problems.

Moving Away from the Natural Attitude

In his 1911 essay "The Perception of Change" Bergson describes the relationship to nature that is established on the basis of the intellect, science and technology as one in which we "obey in order to command"; the philosopher, on the other hand, "neither obeys nor commands; he seeks to *sympathise*" (CM 126; O 1362, translation modified). One course is given by nature, the nature that organises us as intellectuals – that is to say as artisans or survivalists – and that we continue by organising nature. Insofar as we are intellectual beings we are like the ant: the organising work of nature simply continues through us; it is merely mediated and complicated by the indetermination that gives rise to science and technology. Science, says Bergson, "is obliged to use craft with nature, to adopt towards it the wary attitude of an adversary [...] in order to submit it to the action of man", the philosopher, on the other hand, "treats nature as a comrade" (CM 126; O 1362). What is required, then, in Bergson's terms, is not an engagement with the details of science – an assessment of whether this or that intervention into natural processes works or not – but a fundamental shift in attitude away from 'obeying in order to command' altogether, and towards participation.

We cannot say that Bergson is in a traditionally philosophical pursuit of truth here; he is in pursuit of appropriate practical measures that might, if not give back quality and significance ("joy") to modern life, at least avert the suffering that humanity appears to be setting itself up for. Indeed, Bergson had always worked with a notion of truth as provisional and knowledge as probabilistic. When he begins to consider the implications of knowledge practices considered as *activities* in the period following *Creative Evolution*, he recognises that truth is also *pragmatic*. In his short preface to the French edition of William James' book *Pragmatism* in 1911, Bergson outlines James' view that reality is not a pre-existing state of things that we *discover*, but a process that we actively participate in *creating*. In this context he goes on to re-define his previous distinction between two kinds of knowledge – intellect and intuition – as a distinction between two kinds of action or attitudes, which he compares to a sail-boat and a steamer:

> Both are human inventions, but [the sail-boat] makes only slight use of artificial means – it takes the direction of the wind and makes the natural force it utilises perceptible to the eye; on the contrary, [with the steamer] the artificial mechanism holds the

> most important place – it covers the force it has put into play and assigns to it a direction that we ourselves have chosen. (CM 218; O 1449)

On the whole, Bergson still speaks in terms of knowledge in this text, but this image of the two boats is valuable for reminding us that knowledge is constructed, that it is at bottom an *activity*, and what is more, an activity that is not correct or incorrect, but *more or less appropriate* to its context: "every truth is a path through reality" but only some "correspond to currents of reality" (CM 217; 1448). Others are contingent upon our actions and aims. But what are these 'currents' or 'articulations of the real' that Bergson refers to? First of all, they are real: "these currents are not created by us [but] are part and parcel of reality" (CM 217; O 1448-9). Second, they distinguish reality from the static representations of 'objective knowledge'. Rather, it is a fluid and adaptable reality with which we interact, and in relation to which a range of 'truths' and actions might be equally appropriate. Between controlling and participatory actions, then, or between the steamer and the sail-boat, we have one of those differences of degree that is so great it amounts to a difference in kind: we work *with* evolutionary processes, or we work *against* them.

Thus, we are not presented any longer with the straightforward opposition between "two profoundly different ways of knowing a thing" that we were, for example, in the *Introduction to Metaphysics* of 1903 (CM 159; O 1393, translation modified), and it is worth pausing to highlight the difference between Bergson's earlier and later conceptions (since the earlier is still the most influential). Intuition, he says in that text, is "the *sympathy* by which one is transported into the interior of an object" in order to have absolute, rather than merely relative, knowledge of it (CM 161; O 1395). Now let us be clear; there is no sense in which we can be "transported into the interior" of another object or person. This problematic conception is symptomatic of the early stage of his thinking that we considered in the last chapter, when the continuity of conscious 'duration' was stranded within discrete individuals. By the time of *Creative Evolution*, duration is no longer stranded in *us*, since we are differentiated within *it*, and the stand off between the absolute and the relative (qua internal and external) is overcome. Drawing on new resources from evolutionary biology and

from thermodynamics, Bergson is able to conceptualise 'external' reality as one in which we can participate.

Indeed, we can see how much Bergson's thought has developed when he defines intuition much more convincingly in terms of participation in *The Stating of Problems* in 1922: "its proper domain being the spirit, it would seek to grasp in things, even material things, their participation in spirituality" (CM 33; O 1274). This is a completely different dynamic (and in order that the language of 'spirituality' in which it is expressed here does not distract us, I suggest we think instead in terms of 'evolution' or 'process'). When the question was 'how can we be "transported into the interior" of another object or person', the answer was (at least *my* answer was) 'we can't be'. Now that the question is 'how can we grasp in things their participation in social or natural evolution' the answer is 'by participating in that evolution ourselves'. We cannot know another *individual* from the inside, but what we *can* know from the inside is the broader level of organisation we call *society* (or indeed nature) which articulates us both, like two sail-boats swept along by a single current. We can see then, how this concept of agency as the precise participation in 'articulations of the real' not only takes into account, but is necessitated by the acceptance of society as an evolving and efficacious reality.

Let us summarise what we have said so far. Reality is composed of 'currents' to which our action may be more or less attuned. These currents, though concrete, are not totally determinate, and a range of responses to them may be equally appropriate (there may be different types of sail-boats and different styles of piloting them). However, we are able – indeed we are predisposed by nature and, now more than ever, by technological culture – to disregard them entirely and behave in whatever way we want (like the steamer) and it is this different kind of agency – not the participation in but the control of natural processes – that is inappropriate. But is it necessarily a problem? Consider a number of sail boats occupying the same waters. By following the same currents they would, on the whole, move in a way that is sympathetic to each other; there may be some small bumps – accidents will always happen – but these will be minimal when a number of boats are articulated *en masse* by the same current. Now consider a number of steamers, each of which is free to take whichever direction it pleases, regardless of whatever currents there may be, *and*

has to do so in ignorance of what direction all the others will take (it cannot know them 'from the inside'). The only way of avoiding continual collisions would be to establish an arbitrary code of conduct that all abide by (assuming that such an agreement can be reached at all, and if it is reached that it is honoured). What we have then, is a situation not unlike the 'civil society' of the moderns that we looked at in the introduction – an artificial *contract* in place of the real order that has been represented as 'missing'. Such a contract will both be unbending (steamers cannot be creative, except in a reactionary sense), and it will inevitably represent the interests of some 'steamers' and not others; it is, in short, a fragile and artificial order based in a fear of disorder, as opposed to a real emergent order of natural currents. This is not the only problem, for the steamers in this analogy are not only a danger to each other: the 'water' representing the evolutionary reality – whether it is a social infrastructure or a fragile ecology – can itself be damaged by 'steamer-like' behaviour.

All we have considered so far is the two types of activity or 'attitudes' themselves. Yet if what we are concerned with is the shift from the one to the other then we must look at them in context. The steamer mentality may be inefficient, risky and joyless when compared to the sail-boat, yet it remains the more convincing: the absolute terms of the 'logic of solids' in which it is expressed give it all the appearance of progress. Indeed, we are living at a point in history when a primary preoccupation of western society is the construction of more and more powerful steamers, along with a corresponding body of 'knowledge' that effaces the currents of the real entirely. That is to say, there is no simple choice between the sail-boat and the steamer for a society that has, so to speak, been born and raised on board steamers for several generations now; a society whose dominant modes of knowledge go so far as to dismiss sail-boats as impossibilities, or at best as primitive and ineffective.

Taking into Account our Historical Context

The shift in attitude that Bergson describes does not present us with a symmetrical choice. Not only are we already embedded in a considerably established capitalistic and scientific culture, within which we know, and are

encouraged to know, "very little about our creative ability" (CM 94; O 1334), but that culture is itself embedded in nature, the tendency of which it merely develops. We are, then, doubly predisposed – by nature and by historical circumstance – to remain in an attitude of control towards each other and towards nature itself, or, if we are 'creative', to consider this as nothing more than an individual quirk. The shift towards an attitude of participation, therefore, requires a double effort: not only to think and act in a direction that goes against our nature in the first place, but to do so *convincingly* in an intellectual and scientific culture which is predisposed to reject intuitive thought and participatory action as vague and ineffective when compared to its own standards of certainty and planning. These standards – collected today under the authoritative name of 'science' – are taken as absolutes by those who believe in them, and one powerful way of validating participation as an alternative is to demonstrate the short and contingent history of 'science' itself; this is a method that both Bergson and Brian Goodwin employ to great effect. Complementary to this is Bergson's repeated demonstration that 'science' is not a means of describing how the world is, but a means of acting on the world, and – as Goodwin is able to add a century or so later – of doing so in a damaging way.

Bergson distinguishes three stages that led to the current dominance of science and technology: the emergence of the intellect as the defining characteristic of human consciousness, of science as a detailed development of this characteristic into a comprehensive and detailed body of knowledge, and of technology as a powerful and precise application of this knowledge for practical ends. However, while industrial capitalism and the technological manipulation of nature might come last historically, they nevertheless reveal most clearly the essential tendency of the intellect all along: "intelligence, considered in what seems to be its original feature, is the faculty of manufacturing artificial objects" (CE 90; O 613). Science, which is the intellectual tendency brought to its highest level of precision, is not speculative for its own sake, but preparatory to action, it is "the auxilliary of action" (CM 125; O 1362), and it is this tendency towards fabrication that makes the intellect blind to the internal 'logics of organisation' of society and nature themselves, and as a consequence makes our attempts to organise them potentially damaging.

However, for much of his history *homo faber* was incapable of having a significant impact on his environment or his fellow humans no matter how 'practical' or 'intellectual' he may have been in principle. What makes the tendency towards 'manufacture' dangerous is the *extent* of its development in a technological context where it can have a significant impact on the environment, and the *speed* of its development in a capitalist context where reckless interventions are pushed through in the name of short-term profitability. We should add, importantly, that this development is facilitated and justified by a scientific and rational 'body of knowledge' whose chief characteristics – a willing ignorance and disavowal of its long-term and holistic effects – betray its service to this development. Bergson acknowledges these connected issues in his characterisation of technology as a "vast body" that humanity has developed but which it is as yet unable to control:

> If our organs are natural instruments, our instruments must then be artificial organs. The workman's tool is the continuation of his arm, the tool-equipment of humanity is therefore a continuation of its body. Nature, in endowing us with an essentially tool making intelligence, prepared for us in this way a certain expansion. But machines which run on oil or coal [...] have actually imparted to our organism an extension so vast, have endowed it with a power so mighty, so out of proportion to the size and strength of that organism, that surely none of this was foreseen in the structural plan of our species. [...] Now, in this body, distended out of all proportion, the soul remains what it was, too small to fill it, too weak to guide it. (TSMR 267-8; O 1238-9)

Bergson highlights the two key problems of modern technology applied in an attitude of control: first, the problems technology causes are so vast that their very scale alone may well render them insoluble (we can think of technology proper and problems such as global warming, or political and economic 'technologies' of organisation and problems such as overpopulation and food shortages), and second, until we realise we cannot control evolutionary processes through science and technology, the problems they create won't find a solution – or rather they will find a series of short-term solutions that merely perpetuate the overall problem.

However, Bergson's solution to the problem of technology involves an unlikely combination of elements: first, a historical shift to a new asceticism or 'simple life'; second, a mystic inspiration that will bring about this shift in attitude; and third, technology itself as a necessary condition of being able to achieve it. This last is the most problematic element; we recall that Bergson had claimed mysticism couldn't flourish in harsh material conditions, yet the actual history of mysticism showed the exact opposite. Yet this is the crux of the connection between mechanics and mysticism that gives the chapter its title: "man will only rise above earthly things if a powerful equipment supplies him with the requisite fulcrum" (TSMR 267; O 1238). In this sense "the mystical summons up the mechanical" as the material basis or fulcrum that allows it to develop, and without which it would be unable to (TSMR 267; O 1238). Conversely, given a technological development such as that which occurred under capitalism, we have the problematic 'vast body' of technology, and Bergson adds that "the body, now larger, calls for a larger soul, and *mechanism should mean mysticism*" (TSMR 268; O 1239, my italics). Thus, the two are inextricably intertwined for Bergson. They are the two tendencies of the real itself – the one a temporal, holistic and exponential energy, the other a spatial, fragmented and entropic fall-out; the one an evolution, the other an inhibition... *through which* evolution continues its perpetual feedback loop: the creation of the conditions of creation – identified by Bergson at his historical juncture: it is his snapshot of a crisis, or turning point, in human history:

> Machinery will find its true vocation again, it will render services in proportion to its power, only if mankind, which it has bowed still lower to the earth, can succeed, through it, in standing erect and looking heavenwards. [...] Mankind lies groaning, half-crushed beneath the weight of its own progress. Men do not sufficiently realise that their future is in their own hands. Theirs is the task of determining first of all whether they want to go on living or not. Theirs the responsibility then, for deciding if they want merely to live, or intend to make just the extra effort required for fulfilling, even on their refractory planet, the essential function of the universe, which is a machine for the making of gods. (TSMR 268 & 275; O 1239 & 1245)

Now, the dichotomy or dissociation of these two tendencies is a familiar aspect of Bergson's philosophy; it is common to his biological and his social thought. The "frenzy" however, with which he characterises mechanics and mysticism is specific to his social thought. In natural evolution, dissociated tendencies could develop along their own lines of heredity; in cultural evolution however, the dissociated tendencies co-exist on a single line and tend, as Bergson characterises them, to develop to an excessive degree in turn. So, the frenzy for luxuries that attends the development of industrial capitalism was preceded by an opposite ascetic ideal that predominated in the Middle Ages (TSMR 258; O 1229), and according to these historical 'laws', "we should expect, after the ever increasing complexity of life, a return to simplicity" (TSMR 258; O 1230).

There are a number of issues to clarify here. – First, in what sense will the post-industrial age be a 'return' to the pre-industrial? I have noted previously that the constant language of 'returning' and 'getting back' that Bergson uses is misleading, and the same is true here. The very fact that Bergson is locating the attitude or soul of mysticism squarely *in* the body of technology should tell us that the mystic is taking us into the future, and not the past. Indeed, if we keep in mind the science-fiction like imagery that Bergson utilised in his long description of the mystical experience, it would seem to have more in common with the Futurist manifestos of Pierro Manzoni than any religious texts! And although the iconoclasm of the futurists was very far from Bergson's own respect for past achievements, he certainly shared their fascination with technology, and with the future of technology. – Second, the coming era that Bergson sketches does not continue the somewhat dialectical history that he described. If anything, it puts an end to it by finding a kind of balance that would avoid the excesses of each that had characterised the preceding epochs: "it would seem as though the wise course, then, would be a co-operation of the two tendencies, the first intervening when circumstances require, the second restraining it when it goes too far" (TSMR 255; O 1227). – Finally, the very gesture of speaking of the future in specific terms sounds uncharacteristically prescriptive for Bergson, yet he is clear that "we do not believe in the fatality of history" and that "there is no inescapable historical law" (TSMR 253; O 1225). This is why, presumably, even though there is a historical *tendency* let us say, that would favour a swing towards mysticism and 'simplicity' there is still the necessity for an effort on our

part to bring it about. This raises the question we introduced in the first section, of exactly who brings about the shift in attitude: the mystics, or all of us?

Let us briefly recall the dynamics of change in a 'continuous' or 'virtual multiplicity' and specifically in the virtual multiplicity that is society. We said that society is at once multiple (insofar as it is made up of heterogeneous individuals) and communal (insofar as they are continuous within it), and that any change in the whole will be identifiable in certain points. However, the fact that we can identify these points does not mean that we can reduce the evolution of the whole to the action of its parts. Rather, it is to recognise (in retrospect) that the evolution of a *heterogeneous* whole precisely involves a dynamic in which the 'parts' fulfil diverse roles, some of which will inevitably be more instrumental than others in the direction that evolution is taking. In reality though, there is a single evolutionary activity that may be seen at one and the same time as an activity of society as a real self-organising whole, or of individuals as parts of that whole: *it is entirely a matter of which level we choose to speak at* (this 'middle-out' method of analysing evolutionary processes is a central part of systems-level biology; see Noble 2007, *passim*). Both individuals *and* society are real and active. There is no question as to whether the parts constitute the whole or the whole determines the parts because there is no discrete multiplicity, no atomistic mechanism, within which such a question would have meaning. The aim of research, as Bergson re-orients it, is not to ascertain between individuals and society which is agent and which is patient, but to recognise the integrity of the *whole* social-individual process and ascertain which tendency it is following, the 'open' or the 'closed' (and to ascertain this, of course, with a view to appropriate participation in it).

This view of society as a self-organising process in no way absolves us of action however, for society is still nothing apart from the totality of individual actions. The difference is that this is a real and not an abstract totality, and these individuals are not independent causal agents; the real whole of society is the continuity between them that they must recognise and participate in if they want to *live*, as Bergson says, rather than *merely survive* (or, given the environmental problems of our own day, if they want to survive at all).

So, given the dynamics of social evolution, we can see that all humans may *in principle* live a participatory life. How, then, are we to relate this

potential to Bergson's belief that only certain 'privileged individuals' are instrumental in effecting the great cultural transformation he calls for in his "Final Remarks"? Does the heterogeneity of humanity mean that a few of us are active mystics by birth, so to speak, while the rest are unconscious automata, or even unsympathetic egoists? If this were the case, then all the majority of us would need to do is sit and wait for a mystic to call, going along with the new morality once it is concretised in the legal and obligatory forms that compel acquiescence. However, this is not the sense in which Bergson says certain individuals are 'privileged'. It is a designation that can only be applied in retrospect, after their action has proved instrumental in drawing society after them in the direction of the open, or 'delivered them from the necessity' of obeying (their) nature. While the heterogeneity of society makes the mystic by necessity rare then, the potential to realise this rarity would appear to be in all of us, making effort itself the only (open) ethical imperative, since there is no sure sign, given the contingency of social evolution and the unforseeability of the forms it will take, of when it will pay off.

This is not to say that the open future is entirely contingent though. In the context of participation, 'effort' signifies the development of precision in the recognition of complex emergent processes, 'creativity' means individual action that is in sympathy with them, and 'freedom' means *finding one's place* in social and natural processes (this has long been a central principle of 'social anarchism' and is now a central principle of environmental thought). Brian Goodwin provides many examples of this type of activity, both social and ecological, that I will look at in the following sections. But it is worth noting in advance, and as the final general point regarding the 'shift in attitude' that a central principle of an overall cultural shift from control to participation is that it is brought about by individuals acting in a way that is appropriate to social and natural processes:

> The focus of the Great Work is on *local* action that realises a collective, cooperative vision, but this action is based on *universal* principles of coherent behaviour that we have learned from the observation of nature. […] These principles apply to the *process* whereby coherence arises, not to some abstract,

> transcendental or ideal features of the *state* towards which we are moving. (Goodwin 2007: 161)

We will examine this difference – between participation in an emergent process and approximation to a given ideal – in the following two sections, the first dealing with participation in society and the second with participation in nature. In each section I will look first at what characterises the 'natural' tendency of human behaviour, where Bergson saw it leading and how this compares with the situation today. I will then examine the two directions that, according to Bergson, we can take if we do not simply follow the direction of nature. The one, which Bergson on the whole characterises as 'intellectual', ultimately remains within and reproduces (although it is also a form of resistance to) the structure of the closed society, since it is always based in the representation of the world as a discrete multiplicity. The other is the shift in attitude to participation in the open society, and in nature.

Individual Participation in Society: Beyond the State

In my consideration of Bergson's social thought, I have emphasised the importance of understanding nature, culture and individuality as a coherent whole, and what is more, one that is perpetually evolving, even through the relatively stable systems that it gives rise to. In the case of society, this stability is essential in the practical sense of the word, yet this perpetual evolution is essential in the philosophical sense: society is not to be identified with any given state form, whether actually existing or ideally conceived, and social change is not to be conceived as a transition from one state to another (a transition which I will term 'closed revolution'). On the contrary it is with change itself – creative change or evolution – that society is to be identified. Society – like all things in Bergson's philosophy – is nothing apart from change; it is, at bottom, 'open'. However, it is important to note that the 'open society' does not in any simple sense name something that we could or should achieve. Rather, it names the fundamentally creative social evolution that is always already taking place, but which is also always inhibited by human nature; that is to say, by mechanistic and teleological actions based on intellectual representations of society as a state

rather than a process, and of social change as a series of states. It is only when these state forms inhibit the creative evolution of society to such a degree that is detrimental to the health of societies and the individuals within them that it becomes necessary to recommend participatory practices (and when Bergson said that the philosopher who sees change everywhere is for that reason the one who *cannot* recommend it, he might have added that the philosopher who sees change everywhere *in peril* is for that reason the one who *must*). In recommending a shift in attitude towards participation in the open society then, Bergson is calling for nothing more than that we rediscover our place within social evolution, one from which we have strayed dangerously far.

Society then, is a process of which any given state form is merely a snapshot. However, while the principle that 'states are snapshots of change' is a familiar trope of Bergson's critical epistemology, it becomes new and puzzling all over again in the context of his social thought: if *the* state is a snapshot of *social* change what does this mean for us as individuals, as citizens? Should we therefore dismiss the state as illusory? Should we actively rebel against it? Is Bergson's social thought anti-law, anti-government, or even anti-state? In the end it is not, and for the same reason that his biological thought is not anti-DNA, anti-species or anti-adaptation! It is when adaptation leads to a torpor that inhibits creative evolution that it takes on a negative connotation for Bergson. To oppose it *per se* would be to recommend extinction! His social thought is not nihilist, then, in much the same sense that his biological thought was not vitalist. In appealing to creative *revolution* as the fundamental reality of society we are not dismissing the institutions or mechanisms of given state forms as illusory or even as necessarily negative, just as in appealing to creative *evolution* we are not dismissing the genetic and adaptive mechanisms of given organic forms; we are, on the contrary, replacing them in their true context and freeing them from the deterministic or idealistic metaphysical frameworks that renders them abstract and potentially inhibits their actual evolution. Bergson's social thought is less *apolitical* than *supra-political*, in the same sense that he describes intuitive or creative thought, which is broader than and productive of ideas, as supra-intellectual.

What, then, is the role of the individual in social evolution at a concrete historical moment? That is to say, what is our role in relation to real social

mechanisms in the context of a social evolution that is not itself in principle mechanistic? And what is the particular 'moment' of society that Bergson identifies? We have seen his general identification of a historical moment of intellect gaining total power through technology, but in terms of society what does this mean? Let us re-trace his account of human history in order to see how the intellect could take us to the limits of what nature allows – and in doing so, it is true, bring us many great benefits – but without ultimately emancipating us from the problems of the natural society (as we will see, it also created more problems of its own), before looking at how participation might to some degree take us beyond the conditions of both nature and intellect by working towards what Bergson calls 'the open society'.

Heirarchy and War: The Closed Society 'Fresh from the Hands of Nature'

In his "Final Remarks" Bergson describes a number of characteristics of human society. Generally they are negative, and in setting them out he is looking to find some way of overcoming them. While all these characteristics ultimately have their roots in human nature, he distinguishes between those that are present in "human society fresh from the hands of nature" (TSMR 229; O 1201) and those whose development is contingent upon the course of human history. In the former (natural) category we have hierarchy within and war between closed societies, in the latter (historical) category we have democratic government and what we might best call consumerism (Bergson describes a desire for luxury fostered by technological development). Further problems attend our historical development such as nationalism, overpopulation and food shortages. He also acknowledges in passing two major problems of capitalism: a general spiritual malaise that results from alienation, and fraught international relations based on the demand for free trade.

The ways in which, and degrees to which, participation in the open society can overcome these problems varies. Those rooted most deeply in nature are not left behind when (or rather *if*) we make the transition to the open society, but persist within it: "the tendencies of the closed society have, in our opinion, persisted, ineradicable, in the society that is on its way to becoming an open one"

(TSMR 248-9; O 1220). Those that are contingent on human history, on the other hand, may, Bergson believes, be overcome or transformed: "no single one of these difficulties is insurmountable, if an adequate portion of humanity is determined to surmount them" (TSMR 251; O 1222), although we should note that the intellectual tendency, and therefore the potential for other difficulties to develop, will also persist within the open). Let us go back over these characteristic problems in more detail.

The first thing to clarify is that the 'closed society' and the 'open society' are not two *types* of society that can be found in the world (we cannot say, for example, that Russia is a closed society and Iceland is an open society) but two *tendencies* – the one creative and the other inhibitive – that are present in every society: they express the extreme limits of a single evolving reality. What we can say, however, is that in every society in recorded history the closed tendency dominates (though to different degrees) while there has never been an open society even in this 'softer' sense. This is bound to be the case, for Bergson characterises the closed society as "the city" and the open society as "humanity" (TSMR 230; O 1202). The transition from the closed to the open, then, is not a transition from one kind of society to another, but from societies themselves to something else, to 'humanity' as a wider whole that includes them. This is not to say that the open society is a single, global community; to understand it we must recall its connection to what Bergson calls 'the open soul'. The transition to the open society is also a transition within the self; it is the adoption of new values that take the whole of humanity into account, and not just the whole city or nation. We will examine this participation in the open society in due course. For the moment, however, let us look at the characteristics of "the city" as it first emerged from natural evolution:

> The closed society is that whose members hold together, caring nothing for the rest of humanity, on the alert for attack or defence, bound, in fact, to a perpetual readiness for battle. Such is human society fresh from the hands of nature. (TSMR 229; O 1201)

Bergson defines the closed society according to both internal and external characteristics; within a single society we have hierarchical order and discipline, and between a number of societies we have opposition and war: "self-

centredness, cohesion, hierarchy, absolute authority of the chief, all this means discipline, the war spirit" (TSMR 245; O 1216). Indeed, society is only "complete" when it is "organised for war" on the one hand, and "monarchic or oligarchic" on the other (TSMR 239; O 1211). Let us take the two in turn.

Bergson claims that war is "natural" because "the origin of war is ownership, and […] humanity is predestined to ownership by its structure" (TSMR 245; O 1217). Specifically, it is the adaptability of his structure that predestined man to ownership, for instead of making his body his tool, as was the case with the ant, nature "endowed man with a tool-making intelligence" (TSMR 245; O 1216). Such is Bergson's argument; it is not an uncommon one, and it is certainly not one that anybody could definitively prove or disprove. Whatever its origins, the fact remains that war is as old as society (even tribes of primates have extended 'feuds' over territory). Our interest lies in how Bergson develops the connection between war as a natural phenomenon and its development though intellectual and into technological culture, and ultimately how – and whether – a historical shift to participation in the open society might mitigate if not overcome it. The first step in this direction that Bergson takes is to claim that although nature "ordained small societies", she also "left them an opening for expansion; for she also ordained war, or at least made the conditions of man's life such that war was inevitable" (TSMR 238; O 1209-10). We might question the extent to which war alone was responsible for such expansions, and certainly since Bergson's day there has been a movement among historians to emphasise the role of trade over invasion as instrumental in establishing unified cultures among disparate peoples. Indeed, Bergson himself, in attributing expansion to war, acknowledges in all three of the examples he gives that conquest alone is *not* sufficient to create an empire; so, "the great Eastern Empires of bygone days […] fell into decay […] because they were too unwieldy to live", the Roman Empire lasted longer by "grant[ing] to the conquered populations a semblance of independence" and "great nations have [only] been able to build themselves up in modern times […] because constraint, a cohesive force working from without […] has little by little given way to a principle of unity arising from [within]" (TSMR 238; O 1210). Let us now turn to the internal characteristic of hierarchy in order to see how this 'principle of unity' emerges from it, and consolidates the expansion of the closed society that war prepares.

In examining Bergson's account of morality and religion in chapter two, we noted that they are cultural 'variations' on a natural 'theme', the theme being simply that there must be some form of society. Thus, across all cultural variations, Bergson is able to say in general that "this religion, which we have called static, and this obligation, which is tantamount to a pressure, are the very substance of the closed society" (TSMR 220-30; O 1202). Again, he is thinking of society as a real whole, not a collection of individuals, and characterising it in terms of the forces that precisely *prevent* its fragmentation through individual weakness (in the case of religion) or egotism (in the case of morality). So far, however, we have only considered these social 'forces' insofar as they act on any given individual; obligation, for example, is "a force of unvarying direction, which is to the soul what the force of gravity is to the body" (TSMR 229; O 1202). In his final remarks, Bergson makes a new connection; between the 'pressure' of the closed society and the heterogeneity of the individuals it contains, thereby finally returning to the very first point he made in the book but never in the interim developed: that society exerts its pressure on individuals via the medium of other individuals: "behind our parents and our teachers we had an inkling of some enormous, or rather some shadowy, thing that exerted pressure on us through them" (TSMR 1; O 981). This thing, of course, is *society*. In his final remarks, Bergson develops the implications of this 'mechanism' of morality – which operates not directly but through the medium of authority figures – for the heterogeneity of individuals insofar as they are social beings:

> We must always remember that social life was part of the structural plan of the human species just as in that of the bee, that it was a necessary part, that nature could not rely exclusively on our free will, that accordingly she had to see to it that one or a few individuals command and the rest obey. In the insect world, the diversity of social function is bound up with a difference of organisation; you have "polymorphism". Shall we then say that in human societies we have "dimorphism", no longer both physical and psychical as in the insect, but psychical only? We think so. (TSMR 239-40; O 1211-12)

For Bergson's social thought, this is one of the most insightful passages in the book; it provides both a framework for relating 'inter-personal' relations to their source in fundamental social continuity, and a basis on which we will be able to

examine the two primary types of social 'progress' that have developed in modern times: democratic and revolutionary. As we would expect, Bergson clarifies that "this dimorphism does not separate humans into two hard and fast categories; those that are born leaders and those that are born subjects" (TSMR 240; O 1212: this is a view he mistakenly attributes to Nietzsche). Rather, comanding and obeying are two tendencies that are present in every individual, although as is often the case with Bergson's tendencies, only one – obedience – is evident in most of us: "dimorphism generally makes of each of us both a leader with the instinct to command and a subject ready to obey, although the second tendency dominates to the extent of being the only one apparent in most men" (TSMR 240; O 1212).

Before examining the implications of this for politics, we should pause over the fact that Bergson characterises *natural* society according to this *psychical* dimorphism and not according to the *physical* dimorphism that is the only one generally recognised: that of gender. It should be worthy of note that Bergson thus allows us to pose a question that could be of great interest to feminism: how is it that the two social roles – commanding and obeying – of the psychical dimorphism came to be distributed, throughout the course of history, according to the two genders of the physical dimorphism? We may further ask to what extent the reality and great force of the psychical dimorphism – akin in its power to the force of gravity – once associated with the physical, contributed to the perception of female obedience as 'natural'. Unfortunately, these questions are too large by far to go into in this thesis.

With reference to this dimorphism, Bergson is able to flesh out his earlier claim that the natural closed society is a hierarchical one. That the governing class should consider itself to be superior is not surprising. What requires explanation, Bergson says, is "that the people themselves should be convinced of this innate superiority" when "experience should show the ruled that their rulers are men like themselves" (TSMR 242; O 1213 & 1214). Certainly, if society were nothing more than a collection of independent individuals, or discrete multiplicity, such acquiescence would indeed be inexplicable. As was the case with morality and religion, however, it is the reality of society as a continuous multiplicity – and in this case the real heterogeneity or dimorphism of that multiplicity – that accounts for social phenomena that would be inexplicable with

reference to individuality alone. Given the nature of society as Bergson works it out, however, it is entirely consistent that the natural form of government is monarchic or oligarchic, and "authority is absolute on one side, obedience absolute on the other" (TSMR 239; O 1211).

The majority, then, are inclined to obedience not insofar as they are *individuals* who make decisions but insofar as they are *social* (perhaps it is better to use the noun rather than the adjective and say insofar as they are *a society* since, psychically at least, pressure is their very substance, and not merely an attribute) and as such are articulated by the natural dimorphism *of* society. What of the leaders themselves? Keeping to his 'dimorphic' account, Bergson claims that "nature, at once destructive of individuals and productive of species, must have willed the ruthless leader if she provided for leaders at all" (TSMR 241; O 1212). However, while noting that "a ferocious personality is a characteristic trait of that 'political animal' man" Bergson adds that this type of leader is "a failure" (TSMR 240; O 1212). It would seem, by the criteria of the closed society itself, that such a leader would be a success, leading their society to success? This is not the case for Bergson, who, while ultimately holding to the values of the open society, acknowledges at least that the closed society is not identical with the natural characteristics of war and hierarchy, but is able (while still remaining closed) to escape them to some degree through its cultural evolution; in particular, the intellectual invention of democracy.

We had reached a point where war alone was not sufficient to etablish and maintain large scale societies like modern nations, and a principle of unity must arise, Bergson said, 'from within' if they are to survive. It is by expanding his account of the dimorphism of the closed society in the context of the heterogeneity of the open, that Bergson is able to identify this principle as *patriotism*: "it took as noble a sentiment as this, imitating the mystic state, to overcome so deep seated a sentiment as the selfishness of the tribe" (TSMR 239; O 1211). It is worth pausing over this connection Bergson makes between the mystic aspiration and the feeling of patriotism, for it suggest that patriotism is evidence of the existence of the open society, visible within the closed (we will see another later). In the absence of nationalist connotations, patriotism no doubt can be "as much a pacific as a warlike virtue" which "draws to itself the best in all souls" (TSMR 239; O 1211). Having said this, it remains to ask why, even

accepting love for ones own country as a fact, this should necessarily involve xenophobia in relation to others: "that we know nothing about a country to which we have never been is not surprising; but that, being ignorant of it, we should criticise it, and nearly always unfavourably, is a fact which calls for explanation" (TSMR 246; O 1218). If xenophobia between societies, like obedience within them, is inexplicable on the basis of individuality alone, it is not this time the individuality of the citizens, but of the societies themselves that compounds the mystery. If closed societies simply existed, independently; formed by a contingent association of individuals, wars between them might occur, but it would not define their very essence. It is in holding the closed society to be a real level of organisation, dissociated within the evolution of humanity and constituted precisely by turning in on and preserving itself, that Bergson is able to consider the war-instinct as the essence of the closed. The ubiquity and extent of obedience and aggression, or patriotism and xenophobia, would be inexplicable, for him, otherwise.

While Bergson's opposition to war, then, necessarily involves an opposition to hierarchy, insofar as the two are manifestations of the same closed form of social organisation, it does not necessarily involve an opposition to government *per se*. As we will see, Bergson values democracy (with important qualifications) as a form of government that at least points to, if it doesn't actually attain, an alternative to the internalised war-discipline of the hierarchical closed society. The rest of this section, then, will address one of the two key questions of Bergson's final remarks: "are things bound to follow their natural course" (TSMR 248; O 1219).

Democracy and Consumerism: The Closed Society in the Hands of the Intellect

Let us recall the distinction Bergson draws between natural and cultural evolution. First, it is a distinction between necessity and contingency: there must, according to nature, be society, but the form or forms this social organisation takes is entirely contingent on cultural evolution. Second, in cultural evolution, unlike in nature, acquired characteristics can become hereditary: "the experience acquired by successive generations [is] deposited in

the social environment, and given back to each of us by these surroundings" (TSMR 84; O 1062). Finally, the dynamics of change differ in each case, nature evolving through the dissociation of different tendencies along different lines of heredity, culture through what Bergson will call the 'dichotomy' and 'frenzy' of different tendencies which leap-frog each other within a single social history. There are, then, entirely contingent characteristics of the closed society that are acquired and transmitted through a history, and which are prone to sudden and radical changes. The effect that these contingent characteristics have on the original natural ones varies greatly. Of the two that Bergson marks out, democracy and technology, one mitigates the internal problem of the excessive heirarchy of the closed society to the extent that Bergson describes it as unnatural (and even goes so far as to say it points in the direction of the open society), while the other exacerbates the external problem of war to the extent that it could result in the total destruction of one (closed) society by another *and* introduces a whole other problem of the desire for luxury. Let us examine these in turn.

Of all political systems, Bergson claims, democracy is "the furthest removed from nature, the only one to transcend, at least in intention, the conditions of the closed society" (TSMR 242-3; O 1214). In what sense is democracy far from nature, then, and in what sense does its 'intention' transcend the conditions of the closed society? In order to answer these questions, we must consider what democracy *is* for Bergson.

First of all, in its revolutionary origins it is a protest against the suffering that resulted from the overt inequalities of the monarchic and oligarchic natural closed societies. If its principles are liberty, equality and fraternity, it is because their formula was "authority, heirarchy, immobility" (TSMR 244; O 1215). Bergson notes the contradiction between the first two principles, liberty and equality, suggesting that the third, fraternity, is the essential one because it binds them together, and in this it is analogous to the continuity that we said was the defining characteristic of society in general for Bergson, holding together the otherwise irreconcilable unity (of the society) and multiplicity (of its members).

Democracy is not merely a protest that mirrors the closed society however, since its positive aspect – the abstract notion of equality between free individuals – is a purely intellectual representation, like the atomism of seventeenth century physics, and in this respect democracy is "only an ideal"

since “it confers on man invoilable rights [...] it therefore takes for its matter an ideal man” (TSMR 244 & 243; O 1215 & 1214), whereas monarchy or oligarchy are natural realities that articulate people according to their real heterogeneity (even if this articulation closes in upon itself in a network of obligations). This is the root of democracy’s limitations for Bergson. Like the dichotomy of the natural society, it ultimately tends towards a fixed state, albeit one of equality under fixed laws. Very little can be done on the basis of such an ideal except establish and preserve it:

> The democratic precepts, first enunciated with a definite idea of protest, provide evidence of their origin. They are found convenient to prevent, to reject, to overthrow; it is not easy to gather from them the positive indication of what is to be done. (TSMR 244; O 1216)

In short, the society of democracy is a discrete multiplicity in which individuals are represented as homogenous, in order to mitigate the negative aspect of heterogeneity in the context of the heirarchy of the closed. Its very intellectualism, remaining within the attitude of control, effaces the possibility of a positive heterogeneity. In lieu of real articulations, the only progress beyond inequality is to do away with real difference altogether. With democracy, then, we have a quantitative equality that remains within the closed society, regardless of what benefits it brings, and not yet the qualitative difference of the open society.

So much for the internal characteristics of democracies. Bergson also distinguishes the democracy of modern nations from that of the ancients based on their external relations: “they were false democracies, those of antiquity, based on slavery, [and] relieved by this fundamental iniquity of the biggest and most excrutiating problems” (TSMR 242-3; O 1214). However, I would dispute this distinction on two counts. First, taking all humanity into consideration (as we must if we are to take seriously the open society *as* humanity) it is not clear that the modern democratic nations are not just as dependent for their comforts on the economic slavery of third world nations as the ancient greeks were on their ‘barbarian’ servants. Secondly, focussing on the political system alone, the democracy of the ancients did at least involve (nepotism aside) the *participation* of all citizens in goverment, whereas contemporary nations do not: they are

merely *representative* governments and as such do not differ from the 'command and obey' dichotomy of the natural society as much as Bergson perhaps thinks they do. It would seem that democracy preserves both the internal and external dynamics of the natural society; it simply does so in the form of an intellectual ideal that is itself distinctly unnatural (the closed society as a discrete multiplicity of homogenous individuals).

Yet despite all this, Bergson says that democracy is "a signpost indicating the way in which humanity should progress" (TSMR 244; O 1215). Given what we have said, in what possible sense could democracy point the way to the open society? It does away with continuity! It does away with heterogeneity! It does away with society itself as an evolutionary reality, replacing it with a set of abstract laws, an artificial or ideal unity! It does not acknowledge, let alone participate in, the articulations of the real. Does it point the way to the open society *via negativa* so to speak, by calling attention to that which it omits as Bergson claimed the Galilean mechanics did? Or does it stand as an example merely in its 'intention' of finding a mode of social organisation that is not given by nature, in its 'effort' against nature? I will return to this issue in considering participation in the open society, but we must note here that Bergson's views on democracy, like many of his views in his Final Remarks, are deeply ambiguous, and I will not be forcing from them a sense that they may not contain. That democracy mitigates certain problems of the attitude of control is undeniable, but it teaches us nothing, as far as I can see, about participation.

Let us look at the other major 'intellectual' development of the closed society, technology. It has two quite separate effects. First is the very simple point that technology makes war worse. Simple it may be, but it is an important issue, and Bergson had seen the first 'technological' war before writing *The Two Sources of Morality and Religion*. The 1914-1918 war not only saw the first use of tanks (called 'dreadnoughts' at the time) and machine guns, but it was also the first time the general public saw photographs and even films of the violence, and the effects of it on the young men, who, due to improvements in medical science, were returning home with disfigurements they would not previously have survived (or with traumatic disorders such as 'shell shock'). Now, we know how

much worse war can be, whether it is the killing of civilians in concentration camps, the nuclear arms-race and 'virtual' threat of the cold war, or the recent raids on the natural resources of the middle east. Bergson's views on what to do about war are some of his least satisfying, but this is not due to any failing on his part, as much as the inevitability of the problem itself. Within his philosophy, as we have seen, war is natural. And despite the widespread misrepresentations of his philosophy there is no sense in which the intuition of duration, or the participation in the open society, involve leaving nature behind. All we can do is mitigate the causes of war, and all Bergson does is suggest ways in which we can do this. Again, I will look at them when we consider participation itself.

More interesting is his account of a desire for luxury that is not evident in nature, but which technological development fosters in us: the demand for "material comfort, amenities and luxuries [...] arise principally from the direction taken by our existence since the great expansion of industry" (TSMR 251; O 1223). Now, Bergson does not suggest that technology can *create* a desire that did not previously exist, so if the desire for luxuries was not a characteristic of the closed society as it emerged from nature what is it in us that consumerism attaches to and exacerbates? If, as Bergson claims, it is only in the context of industrial capitalism that "an irresistable force seems to drive [humanity] more and more violently towards the satisfaction of its basest desires" (TSMR 252; O 1223), this force must be rooted deep in our nature; for as he says over and over again in relation to moral obligation, if it came 'from outside' it would have no hold on us.

Unfortunately, Bergson does not actually answer this question. What he does do is distinguish the desires from their objects: it is the mistake of "a purely intellectualist psychology" he says, "to arrange them in a certain gradation, [in which] we are supposed to move up the scale from comfort to luxury" (TSMR 261; O 1232-3). For Bergson, this characterisation of desire as increasing by degrees in relation to its objects implies that technological advancement is the *cause* of consumerism, that a desirable commodity appears, and *then* we want it. What Bergson suggests is that things actually happen the other way around, that desire is original, and that "it is for the sake of our luxuries that we want our comforts" (TSMR 262; O 1233). That is to say, whatever the state of our material existence, we are able to imagine and aspire to an improved state.

Bergson sees the fact that what one generation enjoys as a luxury the next merely takes for granted as proof of this.

The importance of this distinction for Bergson lies mainly in its implications for the possibility of moving beyond consumerism, something it is imperative we do, since the desire for luxuries may itself be a contributing cause of war, in the context of the demands it places on national economies and international trade relations (TSMR 250; O 1221). If technology did cause desire to 'increase' then "there could be no end to the satisfying of our old needs and the creation of new ones" (TSMR 263; O 1234). If desire is, however, simply the aspiration to go beyond our given conditions, then we (as a culture over generations, though not perhaps as individuals) could suffer a massive reduction in material luxuries without necessarily feeling the difference. It is in this sense that Bergson is able to regard the 'standards of living' we have under industrial capitalism as merely superficial, and temporary: "all this will appear as a balloon which man has madly inflated, and which will deflate just as suddenly" (TSMR 262; O 1233). This does lend a certain optimism to his recommendation of a 'return to the simple life' that we will consider shortly, but as we said, it does not explain the nature of the original desire in the first place, so there is perhaps a second point to be made here, although it is not one Bergson himself makes explicit.

We recall how patriotism, as distinct from mere obedience, was analogous with the aspiration or openness of the soul to the mystic's example, even if this openness ended up by taking as its object certain qualities (albeit the 'finest' ones) of its closed society. Is it possible that a similar co-option of the desire to aspire is taking place in the case of consumerism? That, in lieu of any sense of where or how to participate, the desire (fundamentally present, however buried, in all of us) to do so takes as its object the commodities of industrial capitalism, simply because it must be exercised in relation to something? This must, of course, remain a suggestion, but highly speculative as it may be it is at least consistent with the framework (Bergson's) that we are using, and indeed it does suggest at least a general course of action, and perhaps even an optimism regarding it. Strange as it may sound, there may be, in the consumerism of our capitalist culture, evidence of a desire to participate that might, if educated in how to do so, be realised in a more 'joyful' – as Bergson would say – existence.

So, its very contingency on cultural evolution means that we can get away from the desire for luxury in a way we can't get away from the desire for war: "there is such a thing as fundamental nature, and there are acquisitions which, as they become superadded to nature, imitate it without becoming merged into it" (TSMR 234; O 1206). Equally, the contingency of democratic government on a mechanical conception of human society as a discrete multiplicity means that we can get away from it in a way that we can't get away from the natural heirarchy that pertains to our real heterogeneity. Let us look, then, at Bergson's outline of how the technological and political expertise that have so far only been developed in a primarily intellectual context might be put to use to facilitate participatory practices in the open society. In this, then, we will be considering the second major question that Bergson seeks to address in his Final Remarks: "is the distinction between the closed and the open, which is necessary to resolve or remove theoretical problems, able to help us practically" (TSMR 234; O 1206).

From Political to Creative Revolution: Participation in the Open Society

A word of explanation. I am using the term 'creative revolution' first of all because it names the true nature of society as a process of creative change that is not reducible to a series of states. Second, its near identity with the term 'creative evolution' highlights how closely I wish to identify the twin tasks of participating sympathetically in social and natural evolution. Finally, it signifies for me the *collective* activity of participating in the open society. It does not, then, have any analogy with revolution in the usual sense (a mass uprising resulting in a regime change). In his discussion of dimorphism, Bergson says we gain a clear view of this characteristic in times of revolution, when the roles of leading and obeying are redistributed (and he describes this as a motion of the whole society, which he likens to the turning of a kaleidoscope, and not an interaction between individuals): the results can be good, revealing "great men of action" but they are "generally unfortunate" insofar as they merely reproduce the same dynamic of the closed society: a "ferocious personality" takes the lead, and the rest obey (TSMR 240; O 1212). Is there such a thing as an 'open' or

'creative' revolution then? Certainly Bergson seems to suggest there is at least a momentary opening when he attributes the origins of democracy to the French and American revolutions. I would go further, and suggest that the latter is the closest any society has come to an open or participatory mode of organisation.

In its very beginnings at least, the United States of America was a federation of independent territories who organised themselves with the common interest of gaining independence from British rule. It was not intended to become a representational government or 'republic' and in the course of their revolution the tension between federalism and republicanism characterised much of the debates of the 'founding fathers'. It is the federalism, and in particular what we might call the 'bottom-up' organisation according to commonly held principles (drafted initially as a decleration of independence from Britain) that comes closest to satisfying the criteria for a virtual multiplicity: a real whole or continuity between real parts; 'real' in the sense that both levels remain self-organising with neither determining the other. The republic that it quickly became on the other hand, like democracy, is a representational government and therefore, in social terms, an abstraction (or inhibition), and it is instructive, perhaps, of how difficult a participatory infrastrucure is to maintain, in the face of the forces of the closed tendency. But let us leave these suggestions, and look at how Bergson characterises the open society itself.

We have seen already that the open society and the closed society are not, in fact, two types of society but two *tendencies*, one closing in on itself to form the small groups that Bergson likens to 'the city', the other opening out to embrace all humanity. We have also seen that the closed tendency dominates to the extent that it is the only one evident in every actual state or nation. Let us now consider these issues in more detail.

The terms 'the closed society' and 'the open society' are both misleading, but in different ways. First of all, *strictly speaking* the closed society is not *a* society at all, but the dissociation of *many* societies within humanity. Of course we can speak of *a* closed society – we have to if we want to refer to this one rather than that one – but strictly speaking there cannot and has never been *a* closed society, if by that we mean only one, since *its very essence is its opposition* to another. Many of the things that Bergson says, then, and which I say, about 'the closed society' are abstract; they refer to a snapshot, a given

closed society at a given point in time, and not to the essential which is the tendency of humanity to fragment into what to all intents and purposes becomes a discrete multiplicity of competing groups. In this context, the transition to the open society is the overcoming of this fragmentation, and the rediscovery of the real continuity of humanity.

This, in fact, is our second point: again, *strictly speaking* the open society is not a *society* at all, but *all humanity*; for it is misleading to speak of the open society as if it could be opposed to anything else: it is not even opposed to closed societies (except in theory), it cannot be, since it *includes* them. Yet again, we find what by now is a familiar formulation: the open tendency does not *exclude*, but *reveals the real significance of* the closed tendency as a fragmentation that takes place within it; whereas the closed, on the other hand – not the societies themselves perhaps, but their ideologies at least – effaces the very existence of the open, that is to say of *humanity* as a real continuity with reference to which we might re-orient our behaviour.

A final difference between the open and the closed society is, yet again, an asymmetry between them regarding the internal and external dynamics. Internally, whether open or closed, society remains *heterogenous*: in the closed society the heterogeneity takes the form of the psychical dimorphism between those who lead and those who obey; in the open society it takes the form of those who 'get back' to the impetus of life and become mystics, and those who seeing their example aspire to emulate it. This distinction – between obligation and aspiration – depends in both cases on the heterogeneity of individuals within social evolution. The external dynamic, on the other hand, differs absolutely: the closed society, as we have seen, is defined by its very opposition to other closed societies, while the open society is identical with all humanity (and therefore with *all* closed societies). It is nothing apart from them: the difference – as Bergson revealed in the case of consciousness and in the case of life – is between the activity of the parts and that of the whole. In a sense, then, to speak of an opposition between 'the closed society' and 'the open society' is a misleading abstraction; in reality there is only an opposition between *closed societies*. And then there is *the open*. The question is, how do we get there?

Bergson is explicit, at least, in how we can *not* achieve openness: "never shall we pass from the closed society to the open society by any mere broadening

out; the two things are not of the same essence" (TSMR 230; O 1202). The precise nature of this broadening, which Bergson counts as "enlargement *or* improvement" (TSMR 231; O 1204, my italics) is not specified. We might assume though, that enlargement would mean a single global society including everyone, and *perhaps* an end to war, but which would fail to reach openness by preserving the internal dynamic of heirarchy and obedience. Improvement, on the other hand, we might take to mean democracy, which carries the internal dynamic as far as it can go from the natural dimorphism, but which would also fail to reach openness by abolishing the real heterogeneity that is essential to any real whole. For Bergson, to think in terms of 'broadening' or 'differences of degree' "is the error of sheer intellectualism" (TSMR 231; O 1204): it cannot show us the open any more than it can show us consciousness or life. It is the only way, however, that humanity has attempted to organise itself on any significant scale. This is part of the difficulty in speaking of the open society: the only examples available are closed.

However, in another sense, *as a tendency*, the open society has always existed. There has always been 'all humanity'; it is simply the totality of existing people, however fragmented their organisation, and there has always been social evolution, no matter how static the forms it takes on. In reaching it, then, what actually changes? Is it the mere recognition of social evolution in principle that Bergson is referring to? Indeed, he frequently refers to the open society as a *principle*: "the open society is the society which is deemed *in principle* to embrace all humanity" (TSMR 230; O 1202, my italics). Or is it an 'ideal limit' that can inspire us, but which we can never attain? And indeed, Bergson does refer to the open society as a *dream*: "a dream dreamt, now and again, by chosen souls" (TSMR 230; O 1202). If it embraces all humanity *in principle*, this is because *in fact*, humanity is constantly at war; this is not to say that given an effort to recognise and act as a member of the human race first, and of this or that nation second, the fact might not come to resemble the principle more closely (this is a central principle of 'earth democracy'). In what sense is it a *dream* then? Is it utopian, in the sense of a critical and inspiring ideal? In fact it is the opposite, rather than a teleological relationship to some ideal state that we cannot reach in reality, the mystic has a creative relationship to a reality that they bring about precisely *without* knowing exactly what it will be in advance.

We are re-entering here the whole question of Bergson's mysticism, which his account of the shift to the open society is inextricably bound up with. One thing is clear; mystics or 'privileged individuals' have a key role in the transition: "it has only been given to a chosen few to dig down, first beneath the strata of the acquired, then beneath nature, and so get back into the very impetus of life. [...] This impetus is thus carried forward *through the medium of* certain men" (TSMR 236 & 231; O 1208 & 1202). We cannot help but notice the language Bergson is using; in every case the mystic is *passive*: "chosen souls", "a chosen few" and even a mere "medium". Even when he does speak of the mystics' action, it is not precisely their own as an individual, so much as their fulfilling some *destiny*: "an impetus, which had ended in closed societies because it could carry matter no further along, but which later is *destined to be sought out and captured*, in default of the species, by some privileged individual" (TSMR 230-1; O 1203). Thus, the mystics are merely fulfilling, it would appear, the cosmological or divine "essential function of the universe" (TSMR 275; O 1245).

How is this passivity to be reconciled with the effort that Bergson constantly claims is necessary? Again, we must remind ourselves of the dynamics of change of the real whole of society, and that action, or passion for that matter, cannot be attributed to a single agent, and causality is not one way. We have a continuous multiplicity in which action is context dependent and feeds back between the parts and the whole. To ask if the mystic is acting, or merely fulfilling a historical or cosmological function is to import a discourse that was appropriate to the atomistic world view of the seventeenth and eighteenth centuries, but which is entirely inappropriate to Bergson's work in the twentieth. It would be more appropriate to Bergson's context to understand the mystics' role in history as analogous to that of a fixed point attractor in the phase space of social evolution (the analogy does not quite work, since it doesn't adequately represent the individual will of the mystic, but it is better, at least, than linear causality).

What of the historical context, then? The open society "embodies on every occasion something of itself in creations [...] but after each occasion the circle that has momentarily opened closes again [...]; individual aspiration has become social pressure, and obligation covers the whole" (TSMR 230; O 1202). If participation is difficult, one of the reasons is that it is performed with

reference to a fundamentally open future, thus even when Bergson attributes great leaps forward to the mystics and moral heroes it is not entirely clear that they necessarily knew where they were going: "these successive efforts were not, strictly speaking, the progressive realisation of an ideal" (TSMR 230; O 1203). However, recalling the probabilistic nature of participation in articulations of the real, we can say that in an *open* sense, the mystic "advances [did] always take place in the same direction, [for] all aimed at opening what was closed" (TSMR 230; O 1203). Let us pause, however, to forestall any misunderstanding.

There is no sense whatsoever in which the open society is some pure creative alternative to the closed society. It is not a place of radical freedom, where everyone can do whatever they like. The open society is a world in which everyone gives first place to the responsibility to humanity (rather than to the group): "we must face up to [these difficulties] and realise what has to be given up if war is to be abolished" (TSMR 251; O 1222). Indeed, if anything, participation curtails freedom in the individualistic sense. I know this sounds bad! Freedom is an 'up' word in the context of political thought – politicians love using it – but it is not unequivocally a positive political reality. We need only think of Max Stirner or Ayn Rand to know that freedom and right-wing politics are by no means incompatible; or of the power the WTO has to know that economic freedom *in principle* means economic slavery *in fact* for many people. As Brian Goodwin noted: "human freedom is not a sufficient foundation for right action in our present circumstances" (Goodwin 2007: 154). Given its appropriation by ultra-conservative discourses, then, and the current social context of world capitalism, the open society cannot, if it is going to be of any practical relevance, mean pure freedom. Of course, we know already that Bergson *never* recommended pure creativity. And in his social thought – as in his critical epistemology, where different sciences demanded different degrees of re-interpretation depending on their 'proximity' to metaphysics – it is not the case that a major cultural shift towards the open should be recommended unconditionally in all contexts:

> Because the permanence of substance was, in my eyes, a continuity of change, it has been said that my doctrine was a justification of instability. One might just as well imagine that the bacteriologist recommends microbic diseases to us when he shows

> us microbes everywhere. […] A principle of explanation is one thing, a maxim of conduct is another. One could almost say that the philosopher who finds mobility everywhere is for that reason the one who *cannot* recommend it, since […] for him, as for everyone, will arise the question of knowing *to what extent* it is the special appearance called stability, *to what extent* it is change pure and simple, that he must recommend to human societies. (CM 88; O 1328: my italics)

Indeed, a nation that was lacking in basic infrastructures – systems of public health provision, food distribution, etc – would *have* to think of itself first if it wanted to survive at all; it would be appropriate for it to take an 'intellectual' approach to matters of practical organisation. Thus, as we saw was the case with his critique of psychophysics in his very first book, asking *who Bergson is addressing* when he suggests we participate in the open society might in fact reveal a great deal about how he understands that 'society' itself. We can say with relative certainty – for surely he would not have been this naïve – that he is not addressing developing countries; he is not addressing the countries that provide the great democratic nations with the cheap energy, food, clothing and luxuries that allows them to be 'great' democratic nations. He is addressing those nations themselves, and what he is telling them is to think of humanity first, and themselves second, when deciding how to act.

It is in this spirit that Bergson makes some of the strongest points in his Final Remarks. I would not go so far as to say Bergson identifies the League of Nations with the open society, but it is clear from what he says that such a body would retain a major role within it. We might also note that the relationship between the League and its member nations is not unlike that of a virtual multiplicity: like the federalism of the American Revolution, independent groups form a larger whole which is nevertheless real insofar as it embodies common principles that they abide by, while also retaining their own independence as self-organising entities. In the case of the League of Nations however, an organisation whose priority is the abolition of war, Bergson is willing that it *enforces* the participatory attitude if necessary: "it is a dangerous mistake to think that an international institution can obtain permanent peace without having the authority to intervene in the legislation of the various countries, and even perhaps in their government" (TSMR 251; O 9999). We have already said that the war-

instinct, like nature itself, persists within the open society. The problem of putting an end to war, then, is the problem of "to what extent the primitive instinct can be repressed or circumvented" (TSMR 247; O 1219). The difficulty here is that unlike disputes between individuals, which the nature of the closed society as obligatory helps to settle, disputes between closed societies are themselves natural (TSMR 248; O 1220). Rather than addressing the war-instinct directly, then, Bergson instead suggests that we address the various causes that exacerbate it. First, he suggests that if the League of Nations were equipped with an armed force it could intervene directly whenever hostilities begin (TSMR 248; O 1220). Second, he suggests that governments should intervene to place limits on the population growth, because "if the self-reproduction of man is not 'rationalised' [...] we shall have war" (TSMR 250; O 1222). One might object that this idea in particular impinges on individual freedom, but we can only repeat, in the context of participation individual freedom means responsibility to humanity first of all (we might also point out that in 1932 the world population was two billion; today, just eighty years later, it is seven billion, and United Nations estimates suggest it will peak at nine billion by 2050). Thirdly, in light of starving countries Bergson suggests that a "central organising intelligence" should rationalise the production and distribution of food on a global level (TSMR 265; O 1236). Finally, Bergson suggests that the problem of xenophobia be addressed through the establishment of an international organisation dedicated to fostering understanding for the purposes of promoting peace: "anyone who is thoroughly familiar with the language and literature of a people cannot wholly be its enemy" (TSMR 247; O 1218). In fact, Bergson did more than suggest this last point; he was, in 1922, one of twelve founder members, and, until 1925, the first president, of the International Committee on Intellectual Co-operation, the education department of the League of Nations (it existed until 1946, when it was succeeded by UNESCO, as the League of Nations was succeeded by the UN).

What Bergson really means, then, when he speaks of *reaching* the open society, is recognising and acting with reference to humanity rather with reference to one's own group. If this change is possible – or even happening – for Bergson in 1932, it is because he believes that the closed society, as "a discipline demanded by nature" is no longer imperative (TSMR 232; O 1204).

We have, through technology, developed an independence from natural necessity that for the first time in human history could allow us to reach 'the open society', as a participation in "the creation of life in general" (TSMR 232; O 1204). What is more, making this shift *is* imperative precisely because of the problems that technological development has led to in the context of the closed society (and these are far worse in our day than they were in Bergson's, since they effect the natural as well as the social environment).

Individual Participation in Life: Beyond the Social

We have seen that the open society must begin with the open soul, not by expanding the closed but through a principle of non-exclusion. Is it enough for this principle to reach only as far as the human? We have already seen, at the end of chapter two, that Bergson's early celebration of the human in opposition to the rest of nature ultimately collapses, like all prejudice, under its own flawed logic. It is in the account he develops from 1911 onwards, and in parallel with his increasing immersion in questions of morality and mysticism, that we find a 'significance of the human' that is not merely self-celebration, but the recognition of our participation in wider social and natural processes. In dealing with the latter I will be much more brief than I was with the former: we are no longer dealing with Bergson's social thought, although it is necessary to show where it leads, both according to its own logic, and according to the new ecological priorities of our own time. In dealing with these, I will on the whole refer to thinkers other than Bergson, yet throughout I will be highlighting theories and actions that fulfil the requirements of participation in the open society, a society that from this point on takes in the whole of life, not just the whole of humanity.

In "Living the Great Work", the final chapter of *Nature's Due*, Brian Goodwin calls for a shift in attitude that echo's Bergson's own in his "Final Remarks":

> The Great Work, the *Magnum Opus* in which we are now inexorably engaged, is a cultural transformation that will either carry us into a new age on earth or will result in our

> disappearance from the planet. The choice is in our hands. I am optimistic that we can go through the transition as an expression of the continually creative emergence of organic form that is the essence of the living process in which we participate. (Goodwin 2007: 177)

Like Bergson, Goodwin uses the term 'participation' to describe the mode of behaviour that is appropriate in an evolving world, and imperative in a damaged one. And he – along with others such as Mae-Wan Ho and Vandana Shiva – has gone a long way in developing the kind of precision that Bergson calls for, while also highlighting the *inseparability* of our behaviour towards nature from the social (political and economic) habits and interests through which it is mediated. I will depend heavily on this text for many of the examples of our attitude of control towards nature, and of how we can adopt an alternative participatory attitude towards it. That will be the end of the thesis, save for a brief note on what form a participatory philosophy might take. First, however, let us remain with Bergson in order to examine the relationship to nature that is prescribed for us by nature itself.

Our 'Logic of Solids' as a 'Logic of Violence': the Natural relation to Nature

As soon as we have a world-view that is premissed on the actual separateness of its elements, we have the metaphysical basis for an ethics that is premissed on exclusion. In the 'objective world' of the intellect, there are no articulations of the real that distinguish life from matter, and no sign by which we might recognise that behaviour that might be appropriate in relation to matter may be inappropriate in relation to life. In this respect, the epistemological 'logic of solids' that Bergson criticises in *Creative Evolution* is revealed, in the ethical context of *creative revolution*, to be at the service of a more fundamental 'logic of violence' (and to necessitate, therefore, a much harsher criticism). It continues the natural attitude of each living thing to apprehend the rest of life from the outside as merely material, or, if we wish to emphasise the opportunistic nature of this attitude, as *raw material*:

> It makes us consider every actual form of things, even the form of natural things, as artificial and provisional; it makes our thought

> efface from the object perceived, even though organised and living, the lines that outwardly mark its inward structure. (CE 101; O 627)

The intellect is "created by life, in definite circumstances, to act on definite things" and Bergson is sensitive to the epistemological contradictions of attempting to use it to "embrace life, of which it is only an emanation or an aspect" (CE *xxxv*; O 489-90). However, in *Creative Evolution* he remains insensitive to the ethical implications of this, thinking only in terms of *a deficit of knowledge*, which "is incapable of presenting the true nature of life" and feels "bewilderment" when it is confronted with organisation (CE *xxxv* & 104; O 489 & 632), and not in terms of *an excess of action*, which "does what it can, it resolves the organised into the unorganised" (CE 104; O 632). In such statements Bergson is speaking at an epistemological level, he is describing what is done 'in thought' so to speak, or in the books and research papers of biologists. But in light of his later philosophy of participation, and in the context of acts of violence, speaking at an epistemological level is no longer enough. We know that science 'can't understand' life, but the question remains what can it *do* to it? What *should* it do to it? In other words, it is time to extend this epistemological question into an ethical one, and ask if living beings are not material objects – nor even analogous to material objects – are we justified in treating them as if they were, or to put it in more Bergsonian terms, what tendency are we furthering by doing so?

The intellect might 'resolve the organised into the unorganised' in thought, and we can call this misunderstanding, but let us not forget that it also does so in the laboratory, and that this is called vivisection. In light of this, Bergson's willingness to allow to science its own type of knowledge can take on disturbing practical and ethical implications:

> I recognise that positive science *can and should* proceed as if organisation were like making a machine. Only so will it have any *hold* on organised bodies. For its object is not to show us the essence of things, *but to furnish us with the best means of acting on them*. (CE 60; O 574, my italics)

At the epistemological level that Bergson is thinking at this might be true in itself, but it is nevertheless disappointing to hear him make such a statement,

considering how dark its ethical implications are. It is especially disappointing that the philosopher who repeatedly noted that it is not what a theory *says*, but what it *does*, that is instructive should have inadvertently condoned vivisection.

On a side note, and recalling that these comments appeared in *Creative Evolution* in 1907, we cannot assume that Bergson was entirely innocent of their implications. Largely forgotten now, from February 1903 to March 1910 there were countless demonstrations, many of which escalated into riots, surrounding surgery carried out, without anesthetic, on fully conscious dogs at the University of London. It doesn't seem possible that Bergson was unaware of this (it was very big news at the time), especially while writing on biology. We might also note that in *Creative Evolution* itself, Bergson makes reference to the Russian physician Marie de Manacéine whose research into the effects of sleep deprivation involved keeping dogs awake and in constant activity until they died, and that Claude Bernard, whose 'creative idea' was a major resource for Bergson's 'élan vital' was himself a major supporter of vivisection, saying of the scientist: "he does not hear the animals' cries of pain; he is blind to the blood that flows; he sees nothing but his idea, and organisms which conceal from him the secrets he is resolved to discover" (cited in Preece 2002: 309). Worst of all, in his Final Remarks Bergson actually brings up the subject of vegetarianism, yet fails to follow up the potential this topic offered for extending his 'open society' beyond the human (in a meaningful, and not a merely intellectual sense). In the event, his comments are limited to saying he would probably stop eating meat if he found out it was bad for him, which is hardly a 'loving' attitude in any sense, let alone the specific sense of participation in nature! But we must not labour these points, for it is Bergson's own philosophy that in the end allows us to make them; it is, if you like, a Bergsonian criticism of Bergson! It is important to note such failings though, not only to remain critical – far too many monographs border on hagiography – but to show how hard it is to identify how and where to perform the very effort to participate that Bergson calls for.

So much for the natural relation to nature. It resolves the organised into the unorganized (in practice as well as in theory); it obeys in order to command; it does not participate. Let us now examine where the intellectual development of this natural attitude has led, particularly in the context of technology, before seeing what alternatives a participatory attitude might provide.

Genetic Engineering & Industrial Farming: the Ideal Relation to Nature

In the *Origin of Species* Darwin introduced his new concept of natural selection by using an analogy between variation under domestication and variation under nature. The work of contemporary biologists, no less than that of Bergson, suggests that it is time to move beyond this analogy. The effects of the contemporary techno-scientific "domestication" of nature are so much more powerful than the selective breeding that Darwin considered that they defy comparison (after Bergson, we could say that this is a difference of degree that is so great it amounts to a difference in kind). Rather than an analogy with nature, the evidence today indicates that "domestication" suggests the opposite: the technological manipulation and control of nature is the most short-sighted and destructive line of action we could have taken, disrupting nature and inhibiting creative evolution. Indeed, we are in a period of significant difficulty as a species due to the damage we have caused to the environment upon which we (and our non-human relatives) depend for our existence.

Everyone agrees on this (with the exception of certain religious fundamentalists, myopic research scientists and those capitalists who stand to profit from damaging technologies in the short-term). The disagreement comes in deciding what to do about it, and the solutions fall into two groups. Either we solve the problems that we have caused through centuries of unregulated technological development by the use of further technologies, or we shift our whole perspective away from the control and manipulation of nature and towards an attitude of co-operation and sensitive participation in nature. On the whole, the former response is cached out in scientific terms, while the latter is cached out in a variety of terms, ranging from the scientific to the spiritualistic (and is often misrepresented and dismissed on the basis of the latter alone). Bergson is firmly in the latter camp, along with a number of contemporary biologists – including Brian Goodwin, Steven Rose and Mae-Wan Ho in particular – who, through a critical engagement with the history and principles of their field, are establishing a scientific basis for the recommendation of the regulation *of* science, in much the same spirit that Bergson recommended a 'rationalisation' of

technology.

Alongside her laboratory practice, Mae-Wan Ho has also developed an extensive critique of scientific mechanism, characterizing it as an adolescent phase in the development of the life sciences and claiming that the insistence that the application of methods and principles drawn from the mathematical and physical sciences is inadequate to an understanding of life: in order to reach maturity, biology must adopt a *holistic* perspective appropriate to its own subject, using an intuitive as well as intellectual approach. She emphasizes a view of life as symbiotic, with humans as participants in a creative evolution. Such participation cannot be grounded in an intellectual – that is to say, an *instrumental* – disposition towards nature, the spatial metaphysics of which alienates us from the articulations of the real and from our participation in them.

This is a central theme of Goodwin's *Nature's Due.* The perception of the natural world as a discrete multiplicity leads to a fragmentation in culture itself – and ultimately within each one of us – between the intellectual faculties, knowledge practices and behaviours that are deemed appropriate to 'study' nature, and the intuitive, creative and emotional faculties that are not. Of course, what Bergson revealed and the critical ones among contemporary biologists are consolidating, is the recognition that the intellect *cannot* 'know' nature – it can only know how to control it – and that to truly know nature precisely requires holistic and qualitative approaches. This 'science of qualities' as Goodwin calls it requires first that we bring our whole nature to bear on the study of nature – intuitive, emotional, communal and not just intellectual – and second that we maintain a reflective awareness that our research practices are themselves activities performed within nature: articulated by it and affecting it in turn. This awareness means that unlike controlling action, participation is not based on prior knowledge. Rather, it is there from the start, guiding the construction of knowledge in a way that prevents it from becoming compromised by the attitude of control (that is to say, it prevents knowledge from being mere 'know-how').

Farming practices based on genetic technologies such as the annual use of neutered and patented seeds, or based on industrial technologies such as clearcutting and monoculture, effectively abolish the dynamic conditions of a creative evolution. Indeed, when Goodwin describes the way in which "mechanism works," he uses an analogy with drug addiction: "farmers become

enslaved to 'scientific' methods of production that are intrinsically unsustainable, and new technological 'fixes' are needed to sort out new problems" (Goodwin 1994b: 210). We cannot solve the problems that techno-science has created through further interventions. Indeed, participation has more in common with indigenous knowledge than it does with European epistemology, but it is important to note (as against readings that would suggest Bergson is an "irrationalist" and "anti-science") that this is not essentially at odds with science itself – only with the industrial appropriation of science, on the whole by large corporations (although it does end up feeding back into scientific knowledge, and to the latter's detriment).

The current dominant modes of knowing and acting towards nature are premissed on the separateness of its elements. This is what makes technologies such as industrial farming and genetic engineering both relatively useless and incredibly dangerous. It is the combination of the profit that is to be made from such technologies, along with the convincing scientific language of certainty that is instrumental in selling them, that allows this irresponsible behaviour to continue. That is to say, if we want to understand how the vast majority of science continues to be broadly mechanistic, when the mechanistic world view unravelled well over a century ago, the answer lies not in biology itself, but in economy.

Industrial agriculture differs from traditional agriculture in two basic ways. First, rather than planting complementary crops that protect each other from weather and insects, it uses monocultural methods (single crops planted over massive areas). Second, fertilisers are used to boost production, and insecticides to protect the crops. It was the discovery of the fluidity of the genome in the 1970's that made biotechnology possible, through the construction of plasma 'vectors' to carry genes from one species to another. The problem is that the insertion process is random since there is no way of controlling the position the transferred genes will take up in the host's chromosome: "the only predictable result is genetic instability" (Goodwin 2007: 62). Thus, transgenic crops often have unexpected instabilities: the 'imported' characteristic can fail to be expressed, an unexpected characteristic can be expressed, or the crop can just fail altogether. There is also the possibility of infection to neighbouring crops through horizontal gene transfer (something the industry denies exists). What is

more, in cases of infection, where someones crops are ruined, the offending company cannot be identified because the imported gene sequence is a trade secret. Not only does the corporate context result in highly dubious scientific 'knowledge' then, it also puts an end to the sharing of knowledge within the scientific community. More and more discoveries are patented, rather than published.

Despite the widely recognised dangers of highly unstable genetic technologies, there have been no official published studies on their effects on human or non-human health, and the corporations have no legal liability for any damage they may cause (assuming such damage can be proved). Even worse, though, is the recent strategy of companies claiming ownership of crops that they have damaged. Monsanto, one of the most powerful biotech companies, offers financial rewards to their customers for reporting neighbouring farms they suspect might be infected. When canadian farmer Percy Schmeiser's organic canola crop became infected by the genetically modified crop of a neighbouring farm, Monsanto claimed ownership based on the presence of their transgenes in Schmeiser's crop. Shockingly, the Candian Supreme Court upheld the claim, effectively runining Schmeiser's business. Goodwin draws the following conclusion from this case: "the solidarity between the corporate sector and contemporary 'democracies' is such that these abuses of civil rights and their damaging influence on community relations are sanctioned in the name of technological progress" (Goodwin 2007: 66). The very fact that what are in fact really shoddy technologies can be seen as progress at all reminds us of the esteem in which 'scientific knowledge' is held in our culture. As Mae-Wan Ho says, "science is imbued with moral values from the start, and cannot be disentangled from them; therefore it is bad science that purports to be 'neutral'" (Ho 1998: 7). This point is of great importance, since the fictional distinction between a science that is neutral and value-free, and a technology that can make good or bad use of it, is the reason 'bioethics' is entirely irrelevent to our discussion: it does not question the scientific attitude that underlies biotechnology.

Indeed, its relation to technology is so pervasive that is difficult to say whether it enables technology to develop or merely reflects its development by limiting research – not only research areas but methods and principles too – to

the pursuit of profitable ways of intervening in natural processes, regardless not only of whether they are sensitive to those processes, but also of whether they work at all (once seeds or pesticides have been sold, it makes little difference to the company whether they work or not; indeed, some products are intended to fail so that the customer then has to buy further products that will address the failure). Mae-Wan Ho has highlighted just how pervasive this situation is:

> Practically all established molecular geneticists have some diect or indirect connection with industry. This inevitably sets limits on what the scientists can and will do research on, not to mention the possibility of compromising their integrity as independent scientists. The worst aspect of this alliance is that it has been formed between science at its most reductionist and multinational monopolistic industry at its most aggressive and exploitative. (Ho 1998: 9)

Why does biotechnology exist, then? It is, as Brian Goodwin says "of no value to consumers and simply presents them with unknown risks and dangers" (Goodwin 2007: 63). It should be categorised, in the context of Bergson's final remarks, along with the unnecessary and spirit-enslaving commodities of capitalism. It exists because the companies that produce it convince people to buy it: there are substantial profits to be made in controlling substantial amounts of the world food market – and we might add, on this topic, that James Wolfensohn, President of the World Bank, said "even though global food output is adequate to feed the entire world's population, eight hundred million people are going hungry because they can't afford to buy the food that they or their families need" (cited in Goodwin 2007: 63). Given the deep conflict between the companies who profit from this situation, and the farmers, communities and individuals who suffer as a result of it, the necessity that Bergson recognised a century ago, of 'rationalising' food production in a way that best serves humanity, rather than private interests, is even more imperative now.

A Holistic Concept of Health: the Participatory Relation to Nature

Participation is based in the principle that life is holistic, and that the manipulation of parts has effects on that whole that cannot, in principle, be

predicted in advance. Reductionists may well object that, given a complete knowledge of the parts, prediction is possible, but what Bergson originally revealed was that analytic knowledge alone is by definition inadequate, because it reveals not what life is, but only what we can do to it. As the Bergson scholar and environmentalist Pete Gunter has pointed out, Bergson's focus on the whole of evolution "locates man squarely *in* nature and stresses man's kinship to all living creatures." (Gunter 1999: 168). Bergson's model of evolution as the differentiation of a common impetus clearly emphasizes the importance of studying the evolution of ecosystems as well as individual species. The concept of divergent tendencies within a single evolutionary process means that all evolution, in principle, is symbiotic, and places ecology at the very heart of biology. Indeed, both science and philosophy need to learn how to deal with real complexity rather than simple representations. In this context, a concept such as "conservation" can find a new application, no longer as simply the preservation of life as it is, but rather as the preservation of the dynamism of life so that it can continue to creatively evolve. Given the prevalence of biotechnology in our behaviour towards nature today, then, what is required is both effective regulation of the industry, and the development of precision in alternative practices.

There are, today, a number of principles that can guide such action. The order manifested by healthy living systems is not easy to see, but since Bergson's time we have developed a number of ways of reading these signs. Sensitivity to unpredictable demands from the environment is one characteristic of health, whether it is the heartbeat responding to the behaviour of the organism (the heart is a case where regularity is a sign of danger), or a plant species responding to changes in its environment. One of the problems of both genetically engineered organisms and monoculturally farmed crops is an extreme lack of sensitivity to environmental changes, that renders them unhealthy and dependent on further artificial means of survival (a weakness that is often 'built-in' by the biotech companies, as we have seen, to facilitate the sale of follow-up products).

The origins of dynamic health are unclear: it seems to be a holistic property that affects the 'parts' in the interests of maintaining overall coherence. In contemporary science, these dynamics can be recognized as corresponding to the characteristics of the 'strange attractor'. This kind of health is based not in

the maintenance of a fixed state, but in the creativity that makes a system adaptable. Thus, behaviour towards nature that attempts to fix and reproduce certain characteristics effectively produces all the signs of ill health in the organism or ecosystem concerned. Participatory practices, then, in general, would be those that recognize and preserve the innate creativity of the organism or ecosystem itself, or even seek to re-introduce this property where it is lacking. At the very least, they would learn enough about the context their action is affecting to avoid damaging it.

However, one does not have to take the attitude of participant in order to do what would be considered 'good work' in the interests of a historical shift towards participation; it could equally result from a utilitarian interest in human well-being alone. Rachel Carson embodies this contradiction. Her *Silent Spring* was of great importance for raising awareness about the fragility of the environment, and the immense power of large corporations to damage both nature and society (she describes how laws were changed to avoid challenging corporations over the damage they did). Indeed, this highlights the bravery of Rachel Carson for criticising companies that at the time were acting with impunity. However, also running throughout Carson's book is the theme that nature should be protected not for its own sake, but because it is useful to us (even though she often speaks of protecting the 'beauty' of nature, the value of this beauty rests on the pleasure we can derive from it). While the specific courses of action she recommends contribute a great deal to the general project of developing precision in our participation in nature, then, her basic attitude remains one of control, and her mechanical understanding of ecological networks, for all its impressive complexity, is reflected in her recommendation that we mitigate the side effects of poor control rather than shifting our attitude away from control altogether.

While some projects might be inadvertently participatory, then, while remaining in an attitude of control, others might cultivate what seems to be a participatory attitude, but without any of the precision in action that makes it worthwhile. Like Bergson, Albert Schweitzer made a case for environmental ethics based on a specifically Christian love for all nature, which he called a 'reverence for life'. Seeing a 'will to live' in all creatures, he felt that we should show to each of them the same reverence that we show to our own. However,

this extension of the Christian ethic of treating others as we would be treated ourselves differs markedly from Bergson's immersion of self and other in a unifying Christian 'love' that articulates all living things in a common evolution. For Bergson, love is *substantial community*; it has nothing to do with altruism. There remains a place for charity and even sympathy in relation to 'the other' *insofar as we are individuals* but participation in the open involves a more precise recognition of real continuity. Thus, Schweitzer's heart might be in the right place, but his mind remains intellectual, seeing animals as discrete entities towards whom we take extrinsic, even if altruistic, relations. If I love or 'revere' another creature *as myself*, for Schweitzer I do so because I am charitable; for Bergson I do so because – at a deep natural level – *it is myself*, for at the level of participation in creative evolution, my 'self' is not identified with my 'individuality'.

In conclusion, let us note the inseparability of the participation in nature from the participation in human society, through which any large-scale action towards nature must be mediated. What we are concerned with, then, is not only practicalities, but the legal and political status of the non-human world. Let us bring up, for a final time, the subject of Bergson's apparent speciesism, and begin with the most challenging point.

In a truly open morality, human rights can and should only be a specific instance of animal rights. To place it at the centre is to take a natural or instrumental attitude rather than a philosophical one: for any 'equality' between humans alone is premised on the prior assumption of the inequality of non-humans. This is exactly the dynamic of the closed. We might add that as long as animal rights is a sub-section of moral philosophy, philosophy in no sense seeks to understand the world; it seeks merely to control it. And while Bergson, as we have seen, is very far from taking the open society to its logical conclusion, he does, at least, provide a basis on which others might do so:

> How is it possible to ask for a precise definition of liberty and of equality when the future must lie open to all sorts of progress, and especially to the creation of new conditions under which it will be possible to have forms of liberty and equality which are impossible of realisation, perhaps even of conception, today.

Sadly, this project has formed no part, as far as I am aware, of Bergson's heritage

within philosophy. We can nevertheless highlight a number of people who have gone much further along the same lines in other disciplines.

In his book *Wild Law: A Manifesto for Earth Justice* (2002), Cormac Culinan, an environmental lawyer, develops the notion of 'earth jurisprudence' under which inalienable rights are extended not only to all humans, but to all species, as well as to components of the environment such as the atmosphere, rainforests, oceans and topsoil. This might be hard to understand, but if we accept Bergson's philosophy, or indeed contemporary biology, then we accept a dynamic definition of life according to which it is *appropriate*. Additionally, it reflects the basic intuition of the shift to the open society (a truly open society and not one limited to our own group or species), which is that action that takes into account the whole system of which we are a part is the *only* way of avoiding damaging either the whole itself, or other of its parts: "the well-being of each member of the Earth Community is derived from, and therefore cannot take precedence over, the well-being of the earth as a whole" (cited in Goodwin 2007: 175).

Vandana Shiva takes further another aspect of Bergson's open society in her book *Earth Democracy* (2005), this time, the role of technology in a post-industrial age. In the context of a discussion of developing nations, she exposes the failings of the capitalist notion of progress as involving the exponential (and pointless) production of surplus value, when compared to the natural progress which uses and recycles sustainably without need for accumulation (and Goodwin adds that the accumulation mindset is, like much of our intellectual developments, based in fear of the contingency of the real). Shiva points out that not only is the transformation into a capitalist nation to the detriment of the developing country itself, it is also to the detriment of nature, since it is the capitalist overproduction that is destroying the natural world. We have here, then, another case of the participation in nature being, at one and the same time, the healthiest course of action for society (assuming we are capable of weighing up the long-term and holistic effects).

Since we have raised the subject, let us see what form an open *economics* would take, if it were to participate satisfactorily in social and natural evolution. Bernard Lietaer, head of the Organisation and Planning Department of the Belgian Central Bank explores exactly this question in his book *Access to Human*

Wealth: Money beyond Greed and Scarcity (2003). He characterises capitalist economics as one in which "greed and fear of scarcity are continuously created and amplified, claiming that the role of banks is to maintain that scarcity which, in fact, is not present in nature. As Bergson and all the biologists I have been drawing on recognise, nature is characterised by *abundance*. And Lietaer concurs, pointing out that there is nothing to prevent the free circulation of goods, labour and information. The reason our current economic system is so unnatural, is that it reflects a collective fear of scarcity that is merely a cultural phenomenon, and in no sense essential; it is in the category of intellectual characteristics of the closed society that may, according to Bergson, be done away with if we achieve the shift in attitude to participation. In the context of the open society, then, economics would, Lietaer predicts, be a natural expression of community relations characterised by local currencies such as 'hours systems'. Increased trust within local communities could mitigate the need for individual ownership, and private ownership could transform into shared collective use. Yet again, action that orients itself according to the whole of society is by its very nature of benefit to the individuals within it. This kind of local action would, in turn, place less stress on natural resources and reveal more clearly that nature is abundant, and it is only our relationship to it, and to each other, as they are currently organised, that makes us fearful of scarcity, and, as a result, individualistic.

Participation in the open society and participation in nature go hand in hand. Indeed, any truly participatory activity will not be oppositional.

* * *

Final Reflections: From 'Social Thought' to a 'Philosophy of Participation'

Here is one of a number of statements in which Bergson describes what I have termed his 'deep ecology': "the matter and life which fill the world are equally within us; the forces which work in all things we feel within ourselves; whatever may be the inner essence of what is and what is done, we are of that essence" (CM 124). In terms of society, then, can we also say that there is nothing that passes through the individual – no perception, no knowledge, no action – that

does not also pass through society? If this is true, then there is also *no social theory* that is not, in part, authored by society itself, or at least let us say articulated by society. We only need think of the increasing degree to which conservative political agendas encroach upon education to see that this is a political, as well as a philosophical reality. What is at stake in the Bergsonian critique of those social theories produced by the intellect or 'cinematographic illusion of thought' that we considered in the introduction is not merely the verity of the intellect itself; first, because it is not just 'the intellect' but society itself that produces the theory; and second, because it is not only 'a theory' that is produced but a law, an institution, a constitution, in short, *a political reality*. What is at stake, then, is the degree to which philosophy itself can participate in the opening of society rather than remaining unconsciously complicit with the tendency of life and society to close in upon themselves and, as Bergson often says, 'turn in a circle'.

The circle of cinematographic social theory works like this: the closed society acts as an inhibition of social theory by demanding it be intellectual, and intellectual social theory acts as an inhibition of society by demanding it be closed. In the end, we can say that *intellectual social theory is an activity that is complicit in the closing action of society*. For Bergson, it is always through individuals that society acts, whether closing or opening, and *philosophers are no exception* when they take ready-made concepts that are merely socially or practically useful and present them as the whole and fundamental nature of society itself. In the context of Bergson's social thought, then, which leads us beyond any merely epistemological critique of the cinematographic 'illusion' and towards the study of the very real effects it has, it would perhaps be more honest to drop the language of 'illusion' and speak instead of *a cinematographical inhibition of thought*. To pretend we are dealing with a merely epistemological critique, concerned with the intellect's inability to grasp change, would not only sheild from us the fact that the intellect *can and does* grasp change – grasp it and inhibit it! – it would actually facilitate the intellect in this task, it would be to contribute to the reduction of society – which is a process – to a *state*.

Let us say then, that the most important critical aspect of Bergson's social thought for philosophy itself is that it reveals that a social theory that is based in the function of thought whose very essence it is to efface the real efficacy of

society itself does not mis-represent society, but actually reduces society to its representation (or at least aims – however unconsciously – to contribute to such a reduction). In fact, considering the lack of real agency, the lack of consciousness even, that characterises the 'closed soul' for Bergson, we could say that what we find in intellectual social theory is a case of the closed society *setting itself up* as an ideal *through* the philosopher; that the philosopher is a medium through which society closes in on itself more tightly than ever; or, as Bergson would say, that the philosopher "is acted" rather than "acts". Bergson's critique, if we follow it to its logical conclusion, does not reveal that the intellect *is wrong* about society by representing it as ultimately closed, but that it *makes itself right* by contributing to its closure. Hence, while Bergson would describe an intellectual theory as an illegitimate extension of practical ways of thinking into the realm of speculation, I would suggest his thought reveals something much stronger: the intellect is a way of thinking that imposes itself by force, that makes itself legitimate.

In conclusion, then, let us recall the first words of Bergson's first book, from his preface to *Time and Free Will*: "we necessarily express ourselves by means of words [...] but it may be asked whether [...] by merely getting rid of the clumsy symbols around which we are fighting, we might not bring the fight to an end" (TFW *xix*; O 3). If Bergson remains optimistic that a shift to another attitude is possible, it is not, in the end, on the basis of philosophy at all, but of mysticism. Bergson is explicit, at times, in his preference for it in *The Two Sources of Morality and Religion*: "the passage from the closed to the open is due to Christianity; […] could it have been brought about by *mere* philosophy" (TSMR 61; O 1040, my italics). Are we to understand by this that philosophy is akin to the incomplete mysticism that Bergson says stops short of action, being content with contemplation? He certainly seems to suggest as much: "the philosopher, closeted with his wisdom [...] perfecting his inner self [...] practices that half-virtue 'detatchment'" (TSMR 48 & 51; O 1027 & 1029). Should we say, then, that the 'intuition of duration' of *Time and Free Will* is the 'mere contemplation' of *The Two Sources of Morality and Religion*? Perhaps Bachelard had captured something of Bergson's philosophy after all, when he characterised the deep self of *Time and Free Will* as a kind of blindness, or refusal to think, in which philosophers isolate themselves (except here it would

be a refusal to continue thought into action). In the end, though, intuition is not mere contemplation; this, if anything, is what Bergson's development – too frequently unacknowledged by his commentators – demonstrates. In the context of his later mysticism, intuition no longer contemplates; *it gives us the power to act* – this is the message that gains momentum throughout the course of his work. If this power is only exercised in the description of itself, then philosophy will remain closed, and complicit with the closed society, no matter how much it *talks* about the open: "it is one thing for an idea to be merely propounded by sages worthy of admiration, it is very different when the idea is broadcast to the ends of the earth in a message overflowing with love, invoking love in return" (TSMR 62; O 1040).

Notes to the Text

[1] In his book *Bergson: Thinking Backwards* Moore suggests that Bergson's 1903 essay "Introduction to Metaphysics" was a break between his earlier and later thought (Moore 1996: 9), and that it is the earlier work that is of greater value for resolving certain philosophical problems in the analytic tradition (Moore 1996: *xii*).

[2] Bergson uses the word "social" or "society" on pages 128, 130, 133, 137, 138, 139, 167, 231 and 236 of *Time and Free Will* (corresponding to pages 85, 86, 88, 91, 92, 111, 151 and 154 in *Oeuvres*).

[3] There are a few other references to society in Bergson's work from this early period (which I will take from 1883-1904), although none of great significance. – First, in the introduction to his edited collection from Lucretius, Bergson makes the passing comment that "the first men were truly animals and they lived like them, then little by little they civilized themselves by the invention of fire, of clothes, of arts, of domestic life and of civil society" (*Mélanges* 282, my translation). – Second, in the Prize speech "Good Sense and Classical Studies" Bergson says that education serves a social purpose by instilling common sense in people (*Mélanges* 360). – Third, Bergson's short book *Laughter* (first published in instalments in the *Revue de Paris* in February and March 1899) stands as something of an anomaly during this period. His appeal to society as an essential component underlying any account of laughter foreshadows his engagement with morality and religion of over thirty years later, and I will discuss it in some detail in chapter three, alongside the other cultural analyses of *The Two Sources of Morality and Religion*. Let us note for now that Bergson uses the word "social" or "society" on pages 2, 4, 7, 8, 18, 19, 20, 21, 44, 45, 65, 87, 103, 133, 134, 135, 136, 138, 147, 158, 159, 170, 171, 172, 174, 176, 194, 196, 197, 198, 199 and 200 of *Laughter* (corresponding to pages 388, 390, 395, 396, 408, 418, 428, 436, 450, 451, 452, 453, 457, 463, 469, 470, 472, 480, 481, 482 and 483 in *Oeuvres*); there is also an inconsequential use of the word on page 128 (*Oeuvres* 448). – Fourth, in the 1902 essay "Intellectual Intuition" Bergson refers to "a feeling, individual or social" that the dramatist may "materialise in living personages" (ME 171; O 947). – Finally, in his 1904 celebration of "The Life and Work of Ravaisson" it is interesting that Bergson singles out Ravaisson's belief that the attitude underlying social inequality – greed on the part of the rich, envy on the part of the poor – is more fundamental than the fact of inequality itself. This appeal to an attitude that underlies apparent facts, along with the necessity of a shift in attitude, will come to characterise the more practical side of the mature phase of Bergson's social thought (see CM 227, 233 & 249; O 1457, 1463 & 1478).

[4] There are a number of further references to society in *Creative Evolution*. In the final section of chapter three on "The Meaning of Evolution" Bergson looks at two aspects of the social

that do not feature in the key analysis of chapter two. First he looks at the occurrence of association in microbial colonies (CE 166-7; O 714-5) and later at tradition and culture in human societies (CE 170; O719). In "The Idea of Nothing" (CE 174-90; O728-47 & 1513-5), which is the first section of chapter four but was also published as a separate essay some months previous to *Creative Evolution*, Bergson also makes a number of comments on the social role of the idea of nothing. Bergson uses the word "social" or "society" on pages 11, 66, 91, 101, 102, 107, 110, 111, 166, 167, 170, 184, 186, 189 and 190 of *Creative Evolution* (corresponding to pages 508, 580, 581, 614, 628, 629, 636, 640, 715, 716, 720, 739, 741, 744 and 746 of *Oeuvres*). There is also an inconsequential use of the word on page 208 (*Oeuvres* 770).

[5] There are a number of other references to society from the period surrounding *Creative Evolution* (which I will take from 1905 to 1915). – First, in a short report on the book *Essai d'une psychologie del'Angleterre contemporaine: les crises bellisqueuses* by Jacques Bardoux, given to the Académie des Sciences Morales et Politiques in 1906, Bergson presents Bardoux's account of English society as industrial, urban, and religious, and as pushed towards war and aggression by forces associated with these qualities (see *Mélanges* 676-8). – Second, in another presentation to the Académie des Sciences Morales et Politiques, on the occasion of their annual Dissez-de-Penanrun Award in 1907, Bergson summarizes the book *Etudes de morale positive* by awardee, M. G. Belot. Bergson is particularly interested in Belot's description of morality as inherently social: "any moral obligation is reducible [...] to an obligation towards society", and again, "social-mindedness is the true principle of morality" (M 741-6, my translation). – Third, in a Preface Bergson wrote for a collection of Gabriel Tarde's writings in 1909, he describes Tarde as founding his study of the human soul upon a "science of societies" and the assumption of "the individual as predestined for the social life" (M 812-3, my translation). – Fourth, in 1910-1911 Bergson's course at the Collège de France (on the theory of the person) touched on a variety of familiar themes from *Creative Evolution*, including joy, the "oscillation between the individual and society", and the individual's tendency to unite and form associations which "in turn, bind together in more and more vast societies" (M 871-2, my translation). – Fifth, Society is mentioned a few times in the 1911 essay "Life and Consciousness" (ME 28, 30, 33 and 34; O 831, 832, 834 and 835). Remaining within the *Mind Energy* collection, there is also an inconsequential use of the word in the 1912 essay "The Soul and the Body" (ME 47; O 843). Any reader particularly interested in indexing these terms should also be aware that there are numerous references to the word society as it appears in the name of The Society for Psychical Research in the essay "Phantasms of the Living and Psychical Research" and one more in the essay "Dreams"! – Sixth, in another report to the Académie des Sciences Morales et Politiques from 1913, Bergson summarizes J. M. Baldwin's *Darwinism in the Moral Sciences*, focussing on his criticism of the vulgar Darwinian conception of man as "anti-social", egoistic and

competitive. For Baldwin the real 'I' is a *socius*, and "the fight for life" takes place "between groups" not individuals. Hence morality should reflect this and become an effort to organize the *socii* into an organization of individuals who govern themselves (M 1020-3). – Seventh, in 1914 Bergson presented reports on three books dealing in some way with society: *Sketch from Across the Channel* by Jacques Bardoux discusses the English psychology with reference to cultural practices, ceremonies, and architecture (M 1049-51); *Chartism* by E. Dolléans is a history of the Chartist movement and Bergson discusses their aim of achieving "social equality" via political equality, as well as making several references to socialism (M 1095-8); and *Scandinavia, Scandinavian Nationalism* by J. de Coussange which deals with Scandinavian patriotism, and incidences of strong group identity based on shared languages and customs (M 1098-1101).

[6] From the year 1916 until his death Bergson wrote much less than he did during the earlier years, so although there are fewer references to society overall, they make up a larger proportion of his work during this period. There are numerous references to society in his 1920 essay "The Possible and the Real" and his 1922 introduction to *La pensée et la mouvant*, most coming towards the end of the second part of the introduction, within the discussion of "Philosophy and Conversation" (CM 78-89 / O 1319-1329). See pages 23, 27, 28, 48, 50, 51, 52, 56, 61, 69, 70, 79, 80, 81, 82, 83, 84, 86, 87, 88, 89 and 103 of *The Creative Mind* (corresponding to pages 1264, 1269, 1290, 1292, 1293, 1294, 1297, 1302, 1303, 1310, 1311, 1320, 1321, 1322, 1323, 1324, 1326, 1327, 1328, 1329 and 1343 in *Oeuvres*). Bergson uses the word "social" and the word "society" once each on page 35 of *Duration and Simultaneity* (*Mélanges* 104 & 105).

[7] Bergson was generally very clear about where he stood in relation to other theories, but in *The Two Sources of Morality and Religion* he does not locate himself explicitly in relation to historical or contemporary social theories: Thomas Paine, Adam Smith, Auguste Comte, Herbert Spencer and John Stewart Mill are each mentioned once; Jean-Jacques Rousseau and Emile Durkheim are each mentioned three times; there are a handful of references to Plato, but only one to the *Republic* and none to Aristotle's social thought; there is no mention at all of Hobbes, Locke, Burke, Hegel, Marx, Weber, Simmel or Tarde. Bergson locates himself in relation to Mill, Kant and (implicitly) Hume on morality, to Durkheim and Levi-Bruhl on anthropology, and to Delacroix and Underhill on theology (albeit in a footnote with no discussion of them), but on the whole *The Two Sources of Morality and Religion* remains very lightly referenced compared to his other works.

[8] The reader should note that this section is intended as a *useful* rather than a *decisive* assement of Bergson's thought in relation to the other figures I will cover, and as such deals with the various thinkers and periods breifly and at broad strokes.

[9] Society itself serves a further end for Aristotle: “it comes to be for the sake of life, and exists for the sake of the good life." (*Politics* I.2.1252b27-30). Aristotle's *Politics* begins with the notion of the πολις as the τελος of human beings, and the theme that the good life or ευδαιμονια is the τελος of the city-state, that society exists for the sake of human good, recurs throughout: “Since we see that every city-state is a sort of community and that every community is established for the sake of some good (for everyone does everything for the sake of what they believe to be good), it is clear that every community aims at some good, and the community which has the most authority of all and includes all the others aims highest, that is, at the good with the most authority. This is what is called the city-state or political community” (*Politics* I.1.1252a1-7, see also I.2, III.6, III.9 & VII.2).

[10] A little earlier in the dialogue, Socrates states that Protagoras’ “man is the measure of all things” is just another way of saying “knowledge is nothing but perception” (*Theatetus* 151e-152a).

[11] In *Creative Evolution* Bergson notes that it was Descartes’ failure to follow either path all the way that resulted in him having to paradoxically keep both; if he had affirmed free will in consciousness and “real will in God” then “mechanism would have become a *method* and not a *doctrine*” (CE 220-1; O 787).

[12] “Each of us, glancing back over his history, will find that his child-personality, though indivisible, united in itself diverse persons, which could remain blended just because they were in their nascent state: this indecision, so charged with promise, is one of the greatest charms of childhood. But these interwoven personalities become incompatible in course of growth, and, as each of us can live but one life, a choice must perforce be made. We choose in reality without ceasing; without ceasing, also, we abandon many things. The route we pursue in time is strewn with the remains of all that we began to be, of all that we might have become. But nature, which has at command an incalculable number of lives, is in no wise bound to make such sacrifices. She preserves the different tendencies that have bifurcated in their growth. She creates with them diverging series of species that will evolve separately” (CE 65; O 579-80). While consciousness and life are both virtual multiplicities, and in both cases creation is characterised as a movement from unity to multiplicity, in consciousness this process remains within the bounds of unity: the unity of a single mind that qualitatively differs from itself over time. Bergson usually describes this movement as the actualisation of a deeply felt or lived state in a discursive form (whether actually communicated or merely thought). He often uses the example of the creating of a poem to illustrate this ‘crystallisation’ of an intuitive whole, a model that R. G. Collingwood also uses to describe the creative process in his *Principles of Art* (see Collingwood 1958).

[13] Bergson makes a distinction between badly stated problems, which involve the description of a real unity in abstract terms, and non-existent problems, which involve the assumption that the absence of something precedes by right its mere existence in fact. It is to the former kind that Bergson devoted most attention – among them are ranked the scientific views of consciousness and life that he deals with in *Time and Free Will*, *Matter and Memory* and *Creative Evolution*. Among the latter are the problems of nothingness, disorder and possibility that Bergson deals with more briefly in *Creative Evolution* and in the essays "The Stating of Problems" and "The Possible and the Real".

[14] To be fair to Dawkins, it is worth noting that while he uses deterministic metaphors throughout his *Selfish Gene*, he cannot be straightforwardly assimilated to a reductionist position. While in the context of evolution organisms are vehicles for the survival of atomistic genes in Dawkins's work: it is the genes, and not the whole organism, that is subject to natural selection. In the context of the life of a single organism however, Dawkins accepts that it is an "integrated and coherent" unit in which "genes may interact and even blend" in their effects. Dawkins point as regards natural selection is that "they do not blend when it comes to being passed on to future generations" (Dawkins 1982: 114). While the reduction of inheritance to the passing on of genes is itself highly questionable, Dawkins does not reduce properties of organisms to the action of their genes, remaining sensitive to the environmental and social factors that affect gene expression.

[15] In her book *The Rainbow and the Worm: The Physics of Organisms* Bergson is the third most frequently cited thinker, after the biologist Erwin Schrodinger and the chemist Harold Morowitz. In a footnote to chapter fifteen (which she titled "Time and Free Will"!) she mentions that she has been reading Bergson for at least fifteen years (Ho 1993: 232). Her account of consciousness in terms of an excess of energy available to the organism is deeply reminiscent of Bergson's.

[16] In the Letters to the Editor of the science journal *Nature* in 1912 W. J. Dakin wrote:

> I find that Professor Bergson in his philosophies has been making use of a comparison between the eye of Pecten, the scallop, and the vertebrate eye. This comparison is used as the basis of some far-reaching conclusions, and therefore it becomes important to direct the attention of readers of *Nature* to the fact that the example taken is an extremely bad one. Professor Bergson states that the eye of Pecten agrees in the most minute details with the vertebrate eye. Now there is no resemblance whatever either in structure or development between the two. The only feature possessed in common by both eyes is an inverted retina, and this is by no means unique in the animal kingdom. (Dakin, 1912; see also Dakin, 1910)

Bergson's description of the similarity between the eyes of the species in question lists a

number of analogous features:

> Let us place side by side the eye of a vertebrate and that of a mollusc such as a common Pecten. We find the same essential parts in each, composed of analogous elements. The eye of the Pecten presents a retina, a cornea, a lens of cellular structure like our own. There is even that peculiar inversion of retinal elements which is not met with, in general, in the retina of the invertebrates. (CE 40, O 548)

There is no reference in *Creative Evolution* that would indicate where Bergson got this information.

[17] Indeed, in *Creative Evolution* Bergson had described the mechanistic treatment of life according to mathematical principles as "a certain new scholasticism that has grown up during the latter half of the nineteenth century around the physics of Galileo" (CE 236, see also 13; O 807 & 511). In *Nature's Due* Brian Goodwin also suggests that the modern science for which Galileo, Bacon and Descartes laid the groundwork has now reached its limit as our primary way of knowing and relating to the world (Goodwin 2007: 11).

[18] This makes sense of Bergson's somewhat obscure habit of opposing the word 'indefinite' rather than 'infinite' to the word 'finite'. He never explicitly states the significance of this, but it corresponds to his usual method of rejecting abstract unity as well as discrete multiplicity. We should note that, just as the terms of a discrete multiplicity are preserved and re-integrated into real unity, so the 'finite' has its place in his thought: the *élan vital* itself is a limited force.

[19] Just as Bergson makes it clear that his universe is not infinite in space when he describes it as indefinite (in time), so he makes it clear that it is not eternally one when he describes the experience of it as "*sub specie durationis*" in explicit opposition to Spinoza's *sub specie aeternitatis*. Without going too deeply into the matter, let us note that whatever connection may be established between Bergson and Spinoza on the basis of Deleuze's work, Bergson himself characterised Spinoza's thought by "universal mechanism" (CE 222; O 789) and "fundamental identity" (CE 224; O 791).

[20] Bergson uses a similar image once in *Creative Evolution* to describe the evolution of the organism: "The organism behaves more and more like a machine for action, which reconstructs itself entirely for every new act, as if it were made of india-rubber and could, at any moment, change the shape of all its parts" (CE 162; O 709).

[21] Two specific differences between Bergson's cosmic evolution and the Plotinian emanation are: first, that matter for Plotinus marks the furthest point from the One and is characterised by an outwards movement whereas for Bergson it is dissociated within, and falls back into,

the principle that creates it (see *Enneads* I.8.8); second, Plotinus characterises knowledge of the One as a return towards it while Bergson, although often using the language of a 'return to' pure duration, conceives intuition as a participation in the forward movement of creation, with the 'return' to duration as the means by which this participation is effected – the return to a source of creativity that can only be a forward movement (see *Enneads* IV.3.12).

[22] The necessity of life evolving through matter is at the root of the sometimes contradictory ways in which Bergson describes dissociation: sometimes it has an internal cause ("the explosive force – due to an unstable balance of tendencies – which life bears within itself" (CE 64; O 578)), and sometimes an external one ("matter has a limit of expansion that is very quickly reached" (CE 65; O 579)); sometimes the relation between life and matter is described in terms of a conflict ("the resistance life meets from inert matter" (CE 64; O 578)), and sometimes as a cooperation ("life seems to have succeeded by making itself very small and very insinuating, bending to physical and chemical forces, consenting even to go a part of the way with them" (CE 64; O 579)). We should not get too hung up on these differences; they are accounted for by the fact that Bergson is describing an originally double nature of the real.

[23] In this specific respect, Bergson's rejection of the 'objective world' of the intellect is very like Berkeley's rejection of the substratum of the materialists: the problem is not matter itself, but the inertia it implies. Both thinkers address this problem of inertia with reference to a persistent active principle: in Berkeley's case the will of God replaces matter, accounting for both the apparent externality and continuity of experience; in Bergson's case universal duration re-contextualises it (see Berkeley 1998: 240-8). In this way they avoid the materialist false problem of how an essentially inert matter ever came to be moving in the first place. Indeed, we may note that God retained his place as creator of the universe both for Locke, who used a version of the cosmological argument in his *Essay on Human Understanding*, and for Newton. In his *Essay Concerning Human Understanding* Locke wrote:

> If then there must be something eternal […] it is very obvious to reason that it must necessarily be a *cogitative* being, for it is as impossible to conceive, that ever bare incogitative matter should produce a thinking intelligent being, as that nothing should of itself produce matter. (Locke 1997: 550-1 [IV.10.x])

In his *System of the World* Newton wrote:

> The planets and comets […] may, indeed, continue in their orbits by the mere laws of gravity, yet they could by no means have at first derived the regular position of the orbits themselves from those laws. [...] This most beautiful system of sun, planets, and comets, could only proceed from the counsel and dominion of an intelligent and powerful Being. [...] This Being governs all things, not as the soul of the world, but as Lord over all; and on account of his

dominion he is wont to be called *Lord God*" (Newton 1962: 543-544)

[24] "The cardinal error which, from Aristotle onwards, has vitiated most of the philosophies of nature, is to see in vegetative, instinctive and rational life, three successive degrees of the development of one and the same tendency, whereas they are three divergent directions of an activity that has split up as it grew" (CE 87-8; O 609).

[25] "To find the best specimens of consciousness in the animal we must *ascend* to the highest representatives of the series, whereas, to find probable case of vegetable consciousness, we must *descend* as low as possible in the scale of plants" (CE 73; O 590)

[26] The connection between Sahlins' critique of biological reductionism and Durkheim's affirmation of sociological rationalism is informed by Janna L. Thompson's essay "Human Nature and Social Explanation" (see Thompson 1982: *passim*)

[27] I have only considered sociobiology here, but Bergson differs from many thinkers in psychology and philosophy in a similar way, due to their tendency to take social facts as simple and ask if their cause is reducible to individuality or if there is an irreducibly social aspect at work. Bergson differs from Jung in precisely this respect. In his *Archetypes of the Collective Unconscious* Jung, like Bergson, describes the preservation of a social consciousness that is irreducible to individual consciousness.

> My thesis, then, is as follows: in addition to our immediate consciousness, which is of a thoroughly personal nature and which we believe to be the only empirical psyche (even if we tack on the personal unconscious as an appendix), there exists a second psychic system of a collective, universal and impersonal nature which is identical in all individuals. This impersonal consciousness does not develop individually but is inherited. It consists of pre-existent forms, the archetypes, which can only become conscious secondarily and which give definite form to certain psychic contents. (Jung 1980: 43)

However, he also differs on many points. Whereas Jung describes what he calls 'archetypes' that are the same in every consciousness and give form to the conscious experience of the individual, for Bergson, there is no consciousness of the individual apart from the tension between it and social consciousness; second, the social consciousness is not the same in every individual, indeed it maintains social order through a virtual polymorphous determination of humans to command and obey each other; and third, social consciousness is present to the individual as functions that necessitate the actualisation of indefinite forms, not as pre-existing forms or 'archetypes' that determine psychic contents. Similarly, in *The Construction of Social Reality*, John Searle thinks there must be some structures that enable the intentional states required for social institutions to exist: he calls them "background" (Searle 1995: chapter six), but these too are conceived in individual terms.

[28] "We have said time and again that human societies and hymenopterous societies stand at the extremities of the two principal lines of biological evolution. Heaven forbid we should assimilate them to each other" (TSMR 239; O 1211).

[29] "Mankind always presents two essential characteristics, intelligence and sociability. But, from our standpoint, these features take on a special meaning. They are no longer a matter for the psyhologist and the sociologist only. They call, first of all, for a biological interpretation" (TSMR 96; O 1073).

[30] It may be enlightening to note that the Japanese word for ant, *ari*, is represented by an ideograph that brings together the character for "insect" and the character signifying "moral rectitude" or "propriety" (*giri*):

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In Japan, then, the ant is the 'moral insect'! And as Bergson says, its morality is acted automatically. There is no indetermination, no space out of which consciousness might arise. This would suggest that it is inappropriate to characterise the ant-hill as heirarchical, including castes, or individuals who command and obey each other. The moral insect has no need for heirarchies, it is moral by necessity, not by obligation.

[31] Were it not too much of a digression, I would pause here over Bergson's comments on "the natural disobedience of the child" (TSMR 11; O 991) and the fact that "however naturally we do our duty, we may meet with resistance within ourselves" (TSMR 10; O 991). I will return to the necessity of education in the next section when I consider 'social adaptation'.

[32] The suggestion that science, art and philosophy are not also as old as society is more problematic, and does not sit well with Bergson's characterisation of science as a development of the essential tendency of the intellect to fabricate. Given that it is the emergence of this function that characterises the appearance of humanity for Bergson, it would seem that as soon as there is intellect, there is science. Art and philosophy are perhaps a little more ambiguous, but I would tend to think, given Bergson's account of a virtual instinct arising as soon as intelligence arises, that given these two tendencies, the potential for intuition, and therefore philosophy in Bergson's sense, is there even if it is not actualised in any definite form (and if Bergson means philosophy in the traditional sense then it would be immediately implied in the intellect along with science). As for art, we can immediately think of the cave paintings that are some of the earliest human artefacts, but again, given the indetermination of consciousness, and the way in which he says the tool reacts on its maker, it seems that for Bergson, as soon as there is a tool making intelligence there is the circuit of

increasingly creative practices, even if it is subsumed, at first under practical interests. I would be inclined, overall, to favour Bergson's view of an evolutionary leap forward in which all these activities appear at once.

[33] This difficulty is compounded by the fact that in most of the historical material in *The Two Sources of Morality and Religion* it is not clear what primary data Bergson himself refers to. At one point he indicates that introspection, and the observation of primitive people and children, could reveal the natural functions that remain unchanged beneath the cultural evolution of different forms of morality and religion (TSMR 236-7; O 1208-9): "if you eliminated from the man of today what has been deposited in him by unceasing education, he would be found to be identical, or nearly so, with his remotest ancestors" (TSMR 235; O 1207). I will not rehearse the story Bergson tells of the evolution of the cultural forms of morality and religion – it is right there in *The Two Sources of Morality of Religion* – nor would it be appropriate, since my focus remains on the general fact of the reality and efficacy of society and its implications for individuality, to get bogged down in an assessment of Bergson's anthropological or historical research which pertains to the details, rather than the principles, of his account of social evolution.

[34] "There is a static morality, which exists, as a fact, at a given moment in society; it has become ingrained in the customs, the ideas, the institutions; its obligatory character is to be traced to nature's demand for a life in common. There is on the other hand, a dynamic morality which is impetus, and which is related to life in general, creative of the nature which created the social demand" (TSMR 231-2; O 1204).

[35] Bergson here appears to follow Aristotle's reservations about the usefulness of Plato's Ideas for our knowledge of actual things: "what the imitation of the forms could be [Plato] left an open question" (*Metaphysics* I.6)

[36] On mimetic variation Dawkins writes: "Consider the Idea of God. We do not know how it arose in the meme pool. Probably it arose many times by independent mutation" (Dawkins 2006: 192); and on cultural selection: "The idea of hell fire is, quite simply, self-perpetuating, because of its deep psychological impact" (Dawkins 2006: 198). The religious examples are not accidental. They are characteristic of Dawkins' use of mimetics to underwrite his criticism of religion – perpetuating the simplistic view of it as passive and unthinking because of its lack of 'evidence' (as if the real life of religion lies in 'knowledge claims' about God!) with reference to the passivity of the person in general.

[37] Mary Midgeley only just stops short of describing it as pathological in its desire for unified knowledge in her critical response "Why Memes?" (see Midgeley 2001) and Stephen Jay

Gould has described the approach as "Darwinian fundamentalism" (see Gould 2001).

[38] Bergson approaches the problem of free will in the form of an antinomy, which he uses in much the same way that Kant does in the 'dialectic' of his three critiques, presenting opposed arguments alongside each other in order to show that they are consequences of a single deeper cause. As with Kant, Bergson's intention is to explain the emergence of the antinomy as at least natural, if not inevitable, while indicating that its resolution lies in the critique of the underlying conditions of the two arguments (see Lindsay 1911, chapter two).

[39] If the scientific study of consciousness was to be possible at all psychology had to resolve the philosophical dualism of mind and body in such a way as to render the mind subject to experimentation. In practical terms, experimental psychology could not treat consciousness directly, so focussed on the physiological conditions of mental events for its data. Theoretically, however, this involved the assumption that the nervous system was the basis of consciousness, a materialistic reduction that characterised the emergence of psychology as a science (and one that has only increased the more science has been able to manipulate the mind through more and more highly developed ways of interfering with brain events). In terms of what was widely perceived as progress in the late nineteenth century, Bergson's use of introspection would have appeared hopelessly outdated, if not reactionary. However, it was this method that revealed the inadequacies of the new science, and preserved a role for philosophy in the study of the mind.

[40] Fechner's *Elements of Psychophysics* (1860) was the first work in experimental psychology, instituting the claim that the mind could be subjected to a mathematical analysis. Wundt's *Principles of Physiological Psychology* appeared in 1873 and he established the first laboratory for psychology in Leipzig in 1879.

[41] The 'traditional' problem of free will that Bergson engages with was actually relatively young, having its origins in the scientific revolution and the conception of an objective world governed by mechanical laws. In this context the problem of free will could only be posed as a stark 'either/or' question: either consciousness is bound by the same mechanical laws that apply to matter or it is not. It is worth noting that before the seventeenth century this was not the case. For example, in a theological context, the problem of free will for Aquinas was a subtler question of the degree to which the will of God participates in the individual will (see Aquinas 1948: ST. I.II. Q.91 & 94). Today, the problem is understood in similar terms, but in an ecological rather than a theological context, with the question of freedom centring around our participation in nature (see Goodwin 2007, chapter 7 and Ho 1993, chapter 15). Nevertheless, there is still a lot of research that seems to take seventeenth and eighteenth century physics as its basis. We can see the presuppositions that Bergson identified as

underlying psychophysics as still present in the current prevalence of cognitive psychology with its connections to neuroscience and computational models of cognition in terms of information processing. We can also see that this model of consciousness is accompanied in the philosophy of mind by a continued limitation of its thinking of free will in terms of choice, the stand off between determinism and libertarianism advancing little further than distinctions within each position (such as hard and soft determinism) or attempts to reconcile them that leave their common presuppositions untouched (such as compatibilism). While an existential focus on the whole personality emerged in the fifties in both psychology and philosophy, it has had little impact on the 'objective science' of consciousness. Perhaps because it remained too firmly attached to proper names (Kierkegaard, Sartre) it failed to be assimilated into scientific discourse. Indeed, psychophysics still exists and still operates under this misconception. The International Society for Psychophysics, which has held an annual conference ("Fechner Day") since its inauguration in 1984, describes its mission as "to further the study and practise of psychophysics, that is to say the measurement and the study of the measurement of psychological functions" (http://www.ispsychophysics.org/content/view/8/41/ accessed 17/04/08).

[42] "Conscious life displays two aspects according as we perceive it directly or by refraction through space" (TFW 137; O 91).

[43] Bergson uses the word "social" and the word "society" once each on page 35 of *Duration and Simultaneity* (Mélanges, pp.104 & 105)

[44] "I would contest M. Deleuze's use of Bergsonism as the title of his study" (Barthélémy-Madaule 1968: 120). Despite misgivings by Bergson scholars about the fidelity of Deleuze's work it turned out to be of the greatest importance for the rehabilitation of Bergson as a valid resource for philosophers. In particular the rigorous treatment Deleuze gave to central concepts such as duration and intuition helped rescue Bergson from charges of irrationalism, or that his writing is metaphorical, that his philosophy simply replayed outdated positions such as spiritualism and vitalism, and that he rejected science as a valid form of knowledge. It also helped rescue him from certain traditions and figures that had taken him up such as Thomism and Tielhard de Chardin, no doubt what Merleau-Ponty had in mind when in his 1959 essay "Bergson in the Making" he denounced Bergsonism for uncritically picking up ready made concepts, which Bergson himself had had to struggle to formulate. In this respect, then, Deleuze's presentation of a rigorous Bergsonism, while monstrous, brought many benefits to Bergsonism. There was, however, a price to pay, and as a result of Deleuze's great success and the lack of other major philosophers taking up Bergson outside of a Deleuzian context, a rather one-dimensional Bergson persisted until very recently, when Bergson again began to be consistently studied in his own right by a new generation in

France, England and America. Let us say then, that Deleuze's way of reading Bergson is highly original, highly selective and highly influential, but, partly because of its development in the context of Deleuze's ontological project and partly because of that project's great success, it is also highly limiting, and it is time for Bergsonism to move on from *Bergsonism*.

[45] "The greater part of the time we live outside ourselves, hardly perceiving anything of ourselves but our own ghost, a colourless shadow which pure duration projects into homogeneous space. Hence our life unfolds in space rather than in time; we live for the external world rather than for ourselves; we speak rather than think; we "are acted" rather than act ourselves" (TFW 231; O 151). In *Matter and Memory* Bergson explicitly distinguishes habits from representations: "the lesson once learnt […], exactly like my habit of walking or of writing […] is lived and acted, rather than represented" (MM 91; O 226)

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The bibliography is divided into three sections: the first lists works by Bergson, the second lists works about Bergson and the third collects all other works. The original date of publication is provided in square brackets where it differs from the edition I have consulted.

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